

**THE RAILWAY GAZETTE**  
A Journal of Management, Engineering and Operation  
INCORPORATING  
Railway Engineer • TRANSPORT • The Railway News  
The Railway Times • Herapath's Railway Journal • RAILWAY RECORD.  
RAILWAYS ILLUSTRATED • ESTABLISHED 1835 • RAILWAY OFFICIAL GAZETTE

PUBLISHED EVERY FRIDAY

AT

33, TOTHILL STREET, WESTMINSTER, LONDON, S.W.1

Telegraphic Address: "TRAZETTE PARL., LONDON"

Telephone No.: WHITEHALL 9233 (12 lines)

Annual subscription payable in advance and postage free  
British Isles and Abroad ..... £2 5s. 0d.  
Single Copies ..... One Shilling  
Registered at the General Post Office, London, as a Newspaper

VOL. 84 No. 26

FRIDAY, JUNE 28, 1946

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## DIESEL RAILWAY TRACTION SUPPLEMENT

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## THE RAILWAY GAZETTE

33, TOTHILL STREET, WESTMINSTER, S.W.1.

## The Shadow of Things to Come?

IF, as seems likely, the Government persists in its intention to nationalise the railways, the increase in charges which the Ministry of Transport is putting into effect from the beginning of next month gives an indication of the policy which users of the lines may expect to be pursued. Although the State has made £195,277,000 from its agreement with the railways for the five years 1941-1945 inclusive, it is alarmed at the prospect of a deficit for the current year, and is seeking to adjust charges accordingly. If insistence on profits from the railways is to be the policy of the Government, the outlook is not very hopeful for the putting into effect of such plans as that produced recently by the departmental committee for improvements in the London area, which were estimated to cost some £230,000,000, and which, at an interest rate of 2½ per cent., would involve an annual charge of some £5,600,000. The railways, indeed, instead of being able to undertake improvements to rolling stock and works, may come to be looked on, as is the Post Office, purely from the revenue-producing point of view. In that event, the public need not look for the provision of greater amenities, such as improved sleeping or buffet cars, or for other higher standards of comfort. Carried to its ultimate conclusion, this policy would be inclined more towards the provision of coaches without seats on suburban trains to enable the greatest possible number of passengers to be carried at the least cost. Under a nationalised system, too, the State could claim immunity from claims for compensation arising from railway accidents, as the Crown cannot be sued. In the event of accidents, the interesting point would arise as to whether the State would conduct its own inquiries, instead of an independent body undertaking this work, as at present, or whether, indeed, any inquiry would be held.

\* \* \* \*

## State Ownership of Power Industries Opposed

A committee set up by the Association of British Chambers of Commerce, to inquire into schemes of nationalisation, has issued a report opposing State ownership of the gas and electricity industries. It recommends that these two industries should continue under company and municipal enterprise, appropriately controlled. It fails to see how State ownership would improve efficiency if the criteria of efficiency were selling price, quality of product, and adequacy of service. The Government would be taking a great risk in nationalising these tried and proved industries, and this was not the time for such risks to be taken. The electricity supply companies of Great Britain issued a statement last week, expressing concern over the low level of coal stocks, and pointing out that between now and next April the gas and electricity industries together will require over three million tons more than was delivered in the comparable period last year, as a result of increased consumption of electricity. Coal stocks were barely a fortnight's supply, and because of its low quality the industry had to use about two million tons more each year than would be needed if the pre-war quality had been maintained. The industry cannot see, either in the Government's handling of the nationalised coal industry, or in the coal industry's response to State ownership, any case for nationalising electricity.

\* \* \* \*

## A Weakness in Current Order Books

One result of the pent-up demand for capital goods which has arisen from supply restrictions during the war years, is that practically all manufacturers are carrying order books which are well filled for periods extending up to three or four years. This is particularly the case of the industries serving the railway systems of the world. Superficially, from the viewpoint of assured demand, the position would appear to be satisfactory, but there is one possibility which is causing concern both in this country and in America. This is, that in time of prolonged shortages, when delivery dates are many months, and sometimes even a year or two, ahead, purchasers in their anxiety to secure goods as quickly as possible, may place their orders with several manufacturers, hoping that one of them will prove able to give earlier delivery. It is very difficult to know what duplication exists in manufacturers' order books at the present time, but obviously it is a

potential weakness in future sales demand which must be taken into account. It is unlikely to exist in the British locomotive building or carriage and wagon supply industries, which are fairly closely co-ordinated, but the possibility is very real in other sections of the railway supply trades, and it may occur where orders have been placed both with British manufacturers and with overseas suppliers.

### The Engineering Industry and Nationalisation

The dangers to the engineering industry arising from the Government's decision to nationalise basic industries, was stressed by Lord Davidson in a recent address to members of the Engineering Industries Association. He said that it was causing more anxiety to engineers than any other factor in the industrial outlook. The engineering industry is a finishing industry, and in the purchasing of materials it has to carry burdens accumulated in every branch of business contributing to the supply of those materials—coal, iron and steel, transport, gas and electricity—which are the very industries singled out for nationalisation. Lord Davidson pointed out that materials account for nearly half the total costs of production, and whether the average level of these costs rose or fell, engineering undertakings could not be sure whether they would be free, as in the past, to choose their own suppliers. They did not know whether British Government steel would be sold at an economic price, governed by the cost of State production, or whether they would be required to subsidise State-controlled plants. The real needs of industry were technical; not who was to own and control, but how much could be produced, and how soon.

### Road Transport Nationalisation

The statement in a London newspaper recently that the nationalisation of the road transport industry had been postponed for twelve months has caused some misunderstanding. The position is that the Ministry of Transport promised to release the road haulage industry from the control which the Ministry has exercised since 1943, and to revoke the order regulating the movement of traffic by road for distances over 60 miles, on an undertaking by the industry that it would formulate and implement a scheme which would ensure the expeditious conveyance of essential traffics by road at reasonable rates. The present control is the result of an agreement between Lord Leathers and the road haulage industry which is due to expire on August 15 next. The requisite scheme has been prepared by the Road Haulage Association and accepted by the Minister, but the Minister has made it very clear to the association that this lifting of the control was without prejudice to the Government nationalisation proposals.

### Improvements for Railway Workers

The improvements which have been conceded to railway workers in recent times have been considerably more than the most optimistic would expect if the railways were State-owned. Mr. J. Benstead, General Secretary of the National Union of Railwaymen, speaking at the annual conference of the N.U.R. Women's Guild at Newcastle-on-Tyne last week, said that during the past year the Union had made greater progress than in any year during the last quarter of a century. Its efforts had added to the wages packets of railwaymen at least £18,000,000. Its membership was now over 410,000. He recalled that the railways had been the first major industry to concede a fortnight's holiday with pay. Further meetings with the companies were now taking place with regard to outstanding concessions, and, in particular, the unions were seeking free travelling facilities for railway shopmen. With this record, it was a little strange that Mr. Benstead should express the hope that within the next year the railways would be placed under State ownership. There are few branches of the Civil Service which enjoy such facilities for cheap travel and so forth, as do railway employees, and the unions might well find that a Government department would be less flexible than a privately-owned company in granting wage increases. General experience does not credit the Treasury with great generosity or with speedy reaction to suggestions.

### Road Vehicle Licence Procedure

On July 1 a beginning is to be made with the resumption of the licensing systems for passenger road services and for goods vehicles which were suspended on the outbreak of war. As we recorded briefly last week, the Area Traffic Commissioners and the Traffic Area Licensing Authorities appointed under the Road Traffic Act, 1930, and the Road & Rail Traffic Act, 1933, will thus again function in the normal way. During the war, as Regional Transport Commissioners, they have been dealing with these matters by the issue of defence permits. The changeover to the pre-war licensing system is to be a gradual process, and the two systems will be in operation concurrently for some time. Normal licences will be issued at first only in respect of new applications and those involving major variations, and for renewals without substantial alteration, defence permits will continue to be issued. The Ministry of Transport has pointed out that the scope and duration of road service licences and of carriers' licences will be subject to such over-riding provisions as may be embodied in legislation for the nationalisation of road transport, so that the licence holder will presumably not be regarded as having any vested interest in the extent of his licence or the time of its currency. One result of this resumption of the pre-war licensing systems will be the reconstitution of the Road & Rail Appeal Tribunal, which was established under the Road & Rail Traffic Act, 1933, to deal with appeals against the decisions of licensing authorities on applications for goods vehicle licences. Throughout the recent war the functions of this tribunal have been suspended.

### New Zealand Orders for Great Britain

Mr. P. R. Angus, Chief Mechanical Engineer, and Mr. F. W. Aickin, O.B.E., Assistant to the General Manager & Chief Legal Adviser of the New Zealand Government Railways, are at present in England finalising contracts for the construction and supply by British manufacturers of electric rolling stock and 3,000 steel goods wagons for use in New Zealand. Contracts have been let for the wagons, but conferences on design and certain important terms of contract are still being held with regard to the electric rolling stock, the supply of which is to be the responsibility of the English Electric Co. Ltd. The orders for the steel wagons, which have been placed with the Metropolitan Cammell Carriage & Wagon Co. Ltd., Charles Roberts & Co. Ltd., and R. Y. Pickering & Co. Ltd., are valued at £1,396,000; the electric rolling stock will cost about £1,750,000. The main items of the electric rolling stock are electric multiple-unit trains comprising in all 40 motor-coaches and 71 driving trailers; also seven electric locomotives. Mr. Angus and Mr. Aickin are also investigating certain other rolling stock propositions on behalf of the Dominion Government.

### "Nice Round Phrases"

Speaking at the North British Railway centenary celebrations on June 20, Sir Ronald W. Matthews, Chairman of the London & North Eastern Railway Company, exposed the implications of a "nice round phrase" often used by Government spokesmen when they declare that an industry is "ripe for nationalisation." It was, he said, a revealing phrase, for it admitted that the Government did not sow the seed, or tend the young plant, but waited for it to ripen before plucking the result of other men's endeavours. The Government reminds us, in fact, of Little Jack Horner sitting in a corner and pulling plums out of the British industrial pie, whereupon it further emulates the nursery rhyme character by exclaiming "see what a good boy am I!" and expecting to receive the applause of a delighted electorate. Many other "nice round phrases" fall on our ears these days with a frequency and profusion that deter the busy man from examining their implications. Plans for the future are freely described as possessing "breadth and vision," and should anyone inquire how their cost is to be met, the answer is "by bold and imaginative finance." Surely here is another phrase that deserves to be pondered in its literal meaning rather than accepted for its fine sound, for an imaginative financier suggests one who draws upon resources which do not in fact exist.

## Road Licensing

THE Ministry of Transport has just announced that the Area Traffic Commissioners and the Traffic Area Licensing Authorities appointed under the Road Traffic Act, 1930, and the Road and Rail Traffic Act, 1933, will shortly be resuming the licensing systems for road passenger services and for goods vehicles. During the war these Authorities have, as Regional Transport Commissioners, been dealing with these matters by the issue of permits under the Defence Regulations.

The change-over to the pre-war licensing system will be gradual, and to avoid congestion and delay it is proposed that the pre-war procedure initially will be applied normally only to new applications for licences and to applications involving major variations from existing licences. Thus the two systems (defence permits and licences) will be in operation concurrently for some time. Permits for road passenger services will continue to be issued or varied where necessary by the Chairman of the Area Traffic Commissioners, and goods vehicle permits by the Licensing Authorities, in their capacity as Regional Transport Commissioners.

It is understood that existing permits for passenger services and existing licences and permits for goods vehicles will be renewed for a further year, subject to the right of the authorities to revoke them if necessary. The Ministry announces, however, that the scope and duration of road service licences and backings, and of carrier's licences, will be subject to such over-riding provisions as may be embodied in legislation for the nationalisation of road transport.

## Railway Union Disputes

"ONE swallow does not make a summer" is true beyond doubt, but one cannot help feeling some concern at certain recent events affecting railway labour. Needless to say, we do not approach the matter in any spirit of hostility to the various unions concerned, but, seeing that the railway labour negotiating machinery functioned with such conspicuous success throughout the very difficult circumstances which arose from time to time, the recent inter-union disputes are, to say the least, very unfortunate. The first is that of rival unions at Swindon, G.W.R. As previously explained in these columns, in connection with an alteration in the design of G.W.R. post-war passenger coaches, it is necessary for the steel roofs to be riveted to a steel rail instead of a wooden rail as formerly.

Hitherto the work had been done by coach body makers who were members of the National Union of Vehicle Builders, but as the new design requires steel to be riveted to steel, and by analogy with other operations, the National Union of Railwaymen claims that the work should be performed by carriage fitters. It is immaterial to the company by whom the work is performed, but, as the unions could not compose their difference and neither set of men would agree to the other performing the work, the construction of new coaches has completely ceased since January last. This has not inconvenienced the men concerned, as it has been possible to employ them temporarily on the repair of carriages, but, as normally five coaches are built each week at Swindon, this comparatively trivial dispute has already caused the lost production of 120 coaches. On the other hand, as is frequently the case, the public will be inconvenienced in the shape of unnecessarily uncomfortable journeys, as the 10 or 12 extra trains would have afforded valuable relief this summer.

The most unsatisfactory feature of the affair, however, is that although it is understood the dispute was referred officially to the Ministry of Labour early in March, we understand the stoppage of work still continues, and the Ministry seems quite unable to persuade the unions to adjust their difference of opinion or accept arbitration.

The second case concerns the London Passenger Transport Board. While the great majority of the Board's omnibus staff belongs to the Transport & General Workers' Union, about 12 men have been members of a much smaller union, the National Passenger Transport Workers' Union, for a number of years. Recently, however, the superintendents of the Board's garages where these men were employed were informed by the officials of the T. & G.W.U. that their members would not work with the members of the smaller union. So the twelve men

concerned have not since been allowed to take out their vehicles, and each day they sign on and draw their pay but perform no work. The implications of this action are serious, and may be very far-reaching, because there are a number of cases where more than one union represents the same grade of railway employees irrespective of the number of men who do not belong to any union. In any case, the prevailing shortage of labour makes the present an inopportune time for tactics of this description, and it is to be hoped that both these cases will be speedily settled.

## Fares Still Cheaper Than in 1846

THE decision of the Government to increase railway fares from July 1 naturally invites comparison between the standards of the present year and those of former periods, and a review of the past century reveals that the general scale of railway fares in relation to purchasing power has never been cheaper than at present. The increases of July 1 will still leave the country with the cheapest average travel charges it has ever enjoyed, with the sole exception of the present rates.

This statement may come as a surprise to many, and may even be disputed by those with memories of particular cheap facilities that proved attractive to their requirements at the time. Yet a simple test can be applied by anyone in relating to his gross income the proportion now required to effect his regular daily transport to work, his essential business journeys, and his travel to and from a holiday resort. Most incomes of employed persons have increased greatly in comparison with any previous period, and Mr. Dalton stated in Parliament on June 18 that, taking the purchasing power of the £1 sterling in the year 1900 as 100, the figure for May 1 of the present year was 45 on the cost of living basis. On the other hand, ordinary railway fares are relatively cheaper than ever before. Excursions and special facilities have not been restored yet, and are generally unlikely while the shortage of staff, rolling stock, and good fuel dominates the railway situation.

In making comparison with the past, two points should be borne in mind. First, that, although for many years previously the passenger fare structure of the British railway companies had been subjected to a process of simplification, before 1928 every individual railway company had its authorised maxima fixed by its own Acts of Parliament. In a great many cases the actual fares were below the statutory maxima and were not based on a common policy as between one company and another. Secondly, the present standard fares are applicable to all trains, without special scales for "express" trains, and with third class passengers admitted to all trains without limitation. As shown in Mr. Charles E. Lee's recent book, "Passenger Class Distinctions," railway passenger traffic began (as early as 1807) on early local mineral railways, but usually was considered as a side issue, and often was undertaken by contractors.

The Liverpool & Manchester Railway in 1830 was the first line to undertake extensive passenger carrying on its own account, and the first to conduct the business in locomotive-hauled trains. It is therefore to this railway that we look for the beginnings of what may be termed "railway practice," and we find a variety of scales of charging (based on stage coach practice) according to the type of carriage and the speed of the train. By the time main-line passenger traffic began (in the 1837-1840 period) there was precedent for at least three classes of traveller, and for variations of fare even in the same class according to the speed of the train. The third class passenger had usually but one train a day—the slowest—and on the Great Western Railway none (where he was accommodated by goods train in open trucks).

In early years some of the main-line companies were in considerable doubt as to whether it paid better to reduce or increase fares. They found that traffic increased with every reduction of fares, but net revenue did not necessarily do so. For quite a long period more than one important company held the view that it was most desirable to increase fares and to handle a limited high-class traffic. Experimental changes were frequent. The third class London to Birmingham single



fare (one train a day) was reduced in October, 1844, from 14s. to 9s. 5d., a reduction of 33½ per cent., which resulted in a few months in a passenger increase of 259 per cent.—still by one train.

The "ordinary" fare of the period was the second class single, and return tickets were unusual. Again taking London to Birmingham as typical (it was the only main line to the North), we find:—

Date	Express train		Ordinary train	
	First	Second	First	Second
September, 1844 ...	32-6	25-0	30-0	20-0
October, 1844 ...	30-0	—	27-0	18-0
April, 1845 ...	30-0	18-0	23-0	16-0
	and			
	27-0			
January, 1846 ...	25-0	—	20-0	14-0

Gladstone's Act of 1844 required one 1d. a mile train a day, at 12 m.p.h. stopping at every station, on all "passenger railways" (those deriving one-third or more of their gross revenue from passengers) with carriages having seats protected from the weather. By 1848 there were upwards of 170 "cheap or third class trains" throughout the country, but many railways showed no desire to provide more than the minimum legal requirement. At that time most "ordinary" passengers travelled second class at roughly 1½d. a mile. Not until August, 1864, was there more than one third class departure from Euston. A survey of 1865 showed for 40 separate railways that first class fares ranged from 1d. to 3½d. a mile; second class from ½d. to 2d.; and third class from ¼d. to 1d. Express train fares were about 2½d. first class and 1½d. second class on the principal main lines.

In October, 1868, the Midland Railway opened its own line to London and initiated the practice of extending the Parliamentary 1d. a mile fare to some of its second-best fast trains. In this it was followed, under stress of competition, by such railways as the Great Northern.

Nevertheless, there was a considerable difference between this and the admission of third class 1d. a mile passengers to all trains, the announcement of which "on and after April 1, 1872," was made by the Midland Railway directors with startling suddenness at the end of March, without consultation with the other main-line railways. The other companies necessarily followed suit in the main, although continuing to bar third class passengers from some expresses. For the first time, the third class became the "ordinary" means of travel, and at 1d. a mile single, with no reduction on return tickets.

Before the outbreak of war in 1914 there was still no standardisation in method or scale of charging, and the issue of various forms of cheap ticket, by some or all trains, had reached enormous proportions. Most of these were withdrawn on the order of the Railway Executive Committee early in 1915, to restrict wartime travel. It was not until January 1, 1917, that any alteration was made in ordinary fares, but on that date an all-round increase of 50 per cent. was made by the Board of Trade, with the avowed object of restricting travel rather than increasing revenue. After the first world war, however, higher costs made it necessary to secure more revenue, and all ordinary fares were increased by a further 25 per cent. as from August 6, 1920, thus making the ordinary third class fare 1½d. a mile.

At railway Grouping on January 1, 1923, fares were reduced by the additional 25 per cent. from 75 to 50 per cent. above the pre-war charge. At the same time the opportunity was taken of introducing, as far as practicable, a standard basis (for the first time) of 1½d. a mile third class and 2½d. a mile first class, with return fares at double the single rate. These fares became the legal standard from January 1, 1928.

As a return ticket is the normal requirement of the ordinary traveller, however, it must not be overlooked that fare-and-a-third monthly returns, with extensive break-of-journey facilities, and availability by alternative routes, were introduced voluntarily by the railways as a summer concession on May 1, 1933. Since 1935 they have been issued all the year round, and thus brought the basic return fare down to 1d. a mile. Even with the new increase this will be but 1½d. a mile.

Summarising, it has been seen that one hundred years ago it was impossible to travel normally by rail at less than about

1½d. a mile, and then with enormously inferior amenities and fast trains barred; that 1d. a mile (with limitations on many railways) generally followed the progressive action of the Midland Railway in 1872; and that after the first world war the basis was 1½d. Today, it is but 1½d. (and from July 1 will be 1½d.) for the monthly return ticket. Can it be denied that this country has never enjoyed cheaper average travel charges? The remark is true even of the new basic single fare of 2d. a mile, ignoring the present return concession which did not exist either a century ago or after the First World War.

\* \* \*

## A Truly International Locomotive

THE "Liberation" 2-8-0 locomotive type which is now being built at the works of the Vulcan Foundry Limited, is indeed an example of determined co-operative effort successfully applied, which must be unique in the history of locomotive engineering. This remarkable machine, which we described briefly in our issue of March 15, after our inspection of the first completed locomotive of the series, is the subject of the detailed account given elsewhere in the present issue, and may well be remembered as an excellent example of the patient overcoming of every imaginable obstacle.

The old Biblical story of the Tower of Babel must at times have lived again in the minds of all those who had to wrestle with the language difficulties in assessing the requirements of several different European countries. The other two obvious difficulties were, first, the fact that inevitably the locomotives would have to be built in this country, where only a small range of materials was then available, and secondly, the need for intimate and detailed operating experience of practically every line over which the locomotives were intended to run. To these may be added the preoccupations of the makers, and of all the firms supplying materials and special equipment, with urgent wartime production for the various Services and Ministries. Bearing all these factors in mind, the first matter on which all those concerned—and particularly the Vulcan Foundry engineers—are to be congratulated is that an agreed design was completed in so short a time, and the second is surely the very creditable result of these efforts.

The "Liberation" locomotives, to many people on the Continent, will be a first introduction to British engineering construction, and a better ambassador in this particular field could hardly be conceived. The care lavished on every detail of the design may bring its own reward, we hope, to the country's export trade in the future. One of the most interesting impressions that we had in examining the completed machine was the curious, yet fundamentally quite justifiable, way in which the practice of first one, then another, country or school of design, came to one's notice. The broad proportions of the engine suggested to us a lineal descendant of the 2-8-0s of Sir William Stanier's design on the L.M.S.R.—a third generation, as it were, with the Austerity 2-8-0s as an intermediate stage. In the design of the various components and in the smaller details, however, there was considerable deviation from these other two essentially British machines. Many of these differences were of great interest and worthy of consideration by manufacturers everywhere.

We noticed in the works that great pains had been taken to reduce the number of separate settings required in the machining of the cylinder castings, a point which makes for considerable saving of time and economy of effort, especially where so large and heavy a casting is involved. The self-cleaning type of smokebox, so largely used in America and recently fitted to several L.M.S.R. locomotives, was not included in the design, possibly out of a feeling for a maximum degree of caution in avoiding spark-throwing and possible damage to precious crops. The use of copper instead of steel for the inner firebox will be noted. We gather that opinion was somewhat divided on this point, among the representatives of the interested Governments, and that copper was eventually adopted because it would not involve the



X-ray examination of welds which forms a routine part of steel firebox construction, and because it was expected that it would be extremely difficult to obtain the necessary equipment for X-ray tests in sufficient quantity in the immediate post-war period. All the steel plates, forgings, and castings used in the manufacture of boiler, frames, etc., as well as the wheels, cylinders, and motion, were of particularly massive appearance, so much so that it was a matter of great surprise to learn, after seeing them, that the total weight of the engine in working order (without tender) was no more than 84.3 tons.

The Walschaerts valve gear is of a particularly satisfying design: all the moving parts are located in the same vertical plane, so that the tendency to whip or buckle is greatly reduced. The piston valves have the very large diameter of 12 in., so that it should be a very easy matter to ensure the efficient entry and exhaust of steam to and from the large cylinders.

In general, the design is simple and straightforward, with little to go wrong; and the robust construction of individual components and the wise provision of ample bearing surfaces should enable these locomotives to withstand rough treatment under arduous conditions. It would be difficult to imagine a design better adapted for the work in view, and any reports which may be received on the actual performance under operating conditions will undoubtedly be accorded a maximum amount of interest.

### \* \* \* "War on the Line"

THE heading of this article might be interpreted in many ways. Actually it is the title of a handsome book which has been published by the Southern Railway to tell the story of that line in war-time.\* The company was fortunate in securing as its historian Mr. Bernard Darwin, whose writings on golfing topics and essays in light literature are a constant source of delight to thousands of readers. He found the mass of records, compiled by the railway departments, almost appalling in its magnitude, but had no lack of helpers to guide his path through the material. The resulting summary may be, as he says, "the work of one who set out with a blank and virgin mind, completely innocent of railway knowledge," but it covers practically every phase of the Southern Railway's activities which could be described in a popular manner for the benefit of the man in the street.

In a brief foreword, Colonel Eric Gore Browne, writing from the Chairman's Room at Waterloo Station, expresses the hope that the book will "serve to remind not only the present generation, but those who come after, what devotion to duty and good team work in a great organisation really mean." We do not think that there can be much doubt on that point.

The book begins with a chapter on Dunkirk. Mr. Darwin tells afresh the story of the fateful days in May and June, 1940, after "the ominous code word 'Dynamo,' which stood for the scheme for evacuating the British Army, was given." The voyages of the Southern Railway cross-channel boats to Dunkirk—and the loss of five of them—are described without any attempt at heroics, but the endurance and courage of the ships' crews are brought out unmistakably. Then 8 or 9 pages explain how the troops were moved inland by train from the English coast—with emergency working at Redhill, Woking, and elsewhere—not forgetting the arrangements for feeding the men at stations like Headcorn, Paddock Wood, Tonbridge, and Guildford.

After the epic tale of Dunkirk, comes a somewhat matter-of-fact account of the various evacuations of civilians. The most exciting event was the movement of 26 or 27 thousand people from the Channel Islands in June, 1940. Appropriately enough, the last man to leave the Islands was a Southern Railway checker who came on board the *Isle of Sark* in the uniform he stood up in, with no "portable property" whatever. There are many picturesque touches of that kind scattered throughout Mr. Darwin's pages.

Dover was so much in the front line that it has a chapter

to itself. One of the most striking illustrations, which accompany the text, depicts two-way shelling across the Channel, photographed from the Dover cliffs. As a relief from bombs and shells, Mr. Darwin rounds off what he has to say about the port with an account of the arrival of a leave boat, in the closing stages of the war, and of the transfer of the troops to a leave train. "The whole process is astonishingly smooth and orderly, and astonishingly silent. There is scarcely a sound, except the tramp of many feet along the platform" and so forth. The passage is slightly irrelevant, but makes uncommonly good reading.

A good deal of space is devoted to the effects of enemy action in London and in the country, especially at Southampton, Plymouth and Portsmouth. The author had no choice in the matter, because 3,637 "incidents" were reported as causing damage and delay on the Southern Railway—many more per route-mile than happened on the other main lines. He must have had difficulty in saying anything new about some of the cases of serious damage and when he came to Cow Lane Bridge, Peckham Rye, he took "leave to borrow from an excellent account in *The Railway Gazette*." From air attacks it is a heartening transition to "D-Day—Before and After."

This is a stirring tale for the preparations for the invasion of Normandy and of the great assault on June 6, 1944. Five Southern Railway steamships were in the thick of the sea operation "Neptune." The keynote to the whole adventure is supplied by one or two sentences from a speech made by Captain Payne of the *Maid of Orleans* to his crew. "Our job is to deliver the troops and keep on delivering. My job is triple, the safe conduct of the troops and you, but that doesn't worry me, because I know you will help me. An appropriate omen—Joan of Arc, Maid of Orleans, liberated France; this *Maid* will help to do so again by the grace of God." For three weeks the good ship did great work before she struck a mine and sank on June 28. Her sister ships were luckier and survived the hazards of the great occasion. By August the Southern Railway train ferries came into their own and carried thousands of railway engines, coaches, guns and vehicles of all kinds to France.

Hard on the story of these doughty deeds follows a review of prosaic subjects such as stores and salvage, defence precautions, the blackout, emergency signs, and travel kiosks. A list of emergency works carried out by the civil engineers is given and the war work performed in the mechanical engineering shops is described in considerable detail. Next, Mr. Darwin waxes enthusiastic over the capabilities of the railway women, who numbered 10,000 in 1944, or 16 per cent. of the whole Southern Railway staff. One of the hallmarks of his literary style is that he frequently allows himself a little Dickens. So, when he writes about women passenger guards, a reference to Mrs. Gamp is not surprising.

There follows an account of "a truly fascinating expedition" to Feltham yard, where 6,000 wagons are marshalled every 24 hours. A visit to Salisbury was also full of interest, though only 1,600 wagons a day passed through the yards there. The traffic included train loads of troops and explosives. In fact, Tom Pinch was not far wrong when he "had a shrewd notion that Salisbury was a very desperate sort of place"! A last chapter, headed "Spare Time Job," explains what was done about Civil Defence, Home Guard, Air Raid Precautions, War Savings, the Spitfire *Invicta*, and even allotment gardens. Not a single activity of the Southern Railway staff appears to be overlooked.

We have enjoyed the perusal of "War on the Line" and congratulate the Southern Railway Company on its enterprise in issuing such an interesting record of its war-time operations. The book, bound in an attractive shade of green—as befits a Southern Railway publication, is wonderful value for its price. It is clearly printed and profusely illustrated. We admire especially two of the coloured plates, "Mulberry Harbour" by Leslie Carr, and "Waterloo Station" by Helen McKie. We have one criticism on the map which is appended. It assumes a knowledge of railway geography greater than many readers will possess. The site of Feltham yard is not shown and the junctions with other railways might have been indicated, so that a layman could see how the chief streams of traffic flow. But that is an insignificant defect in a book which deserves to have a wide circulation.

\* "War on the Line." The story of the Southern Railway in war-time. By Bernard Darwin. The Southern Railway Company, London. Price 7s. 6d.

## LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

## Timetables

5, Hyndford Street,  
Dundee. June 21

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR.—May I most strongly support the plea of your correspondent, Mr. A. R. Elliott, in your June 21 issue, for the introduction of the 24-hr. clock in railway timetables? Take a long journey such as that from Aberdeen to Southampton or Cardiff—the unfortunate traveller, trying to plot his way through a labyrinth of train times, finds himself confused by sudden changes from p.m. to a.m., and back again, without the slightest indication being given. Most people, and certainly all those formerly in the Services, are familiar with the 24-hr. system, and the present seems a favourable time to introduce it.

Yours faithfully,

ALAN SMITH

## Railway Reconstruction in Italy

H.Q., Transportation (British) Main,  
A.P.O. S/551, C.M.F. April 24

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR.—I have noticed with interest from time to time articles in *The Railway Gazette* describing railway reconstruction in various theatres of war, but not until now has it been possible to collate statistics of what has been done in Italy. The railways here are among the most heavily engineered in the world, particularly crossing the Apennines, Alps, and the Dolomites. Some stretches are almost entirely tunnel and viaduct, and each structure is succeeded immediately by another. As an example of this, in the Apennine sector, between Prato and Bologna, a distance of about 80 kilometres, the line is of double track, running in a series of viaducts and tunnels. There are 74 viaducts or bridges, varying in length from 5 to 240 metres. There are 30 tunnels varying in length from about 100 up to 18,507 metres (11½ miles); the last-mentioned is the famous Grande Galleria dell'Appennino, the longest double-track tunnel in the world. The repair of this length involved the use of 5,200 lineal feet of steel bridging, the rebuilding of 4,783 feet of new tunnel lining, and the removal of over 634,000 cubic yards of debris.

Railway demolitions in Italy were probably on the widest scale and the most severe of any in the war. Repairs have been carried out by one or other of three organisations all working under the control of the Director, Military Railway Service:—

- (i) The British section of the Military Railway Service (staffed by British Empire Transportation personnel).
- (ii) The American section of the Military Railway Service.

(iii) Transportation Sub-Commission (Rail) of the Allied Commission for Italy (which only received technical and stores assistance from the Military Railway Service).

The British organisation has been responsible for the rehabilitation of approximately 2,450 miles of track, in which (i) 300 miles had every rail cut by an explosive charge; (ii) 110 miles had been completely dismantled or destroyed in such a way that complete reconstruction was necessary; (iii) the remainder had suffered bomb and battle damage and most of the major structures of 5-metre spans or greater were destroyed. In this length of 2,450 miles, 83 tunnels were damaged or destroyed, and their repair necessitated the clearance and reconstruction of approximately 12,000 lineal feet of tunnel; the greater part of this work was carried out by South African tunnelling companies. Also, 490 bridges or viaducts were repaired or reconstructed, involving the use of some 50,000 lineal feet of steel bridging; and 2,360,000 cubic yards of earthwork was involved in repair and clearance. The total labour effort expended was 41,300,000 man-hours.

The total of all works carried out by the British organisation required the laying of 230 miles of completely new track over deviations around demolished tunnels or bridges, and for rail layouts in military installations such as stores depots. In addition, approximately 280 miles of single rail was used for track repairs, and over 1,600 turnouts were laid. The crossing of rivers required over 40,000 lineal feet of Larssen or American sheet piles, and approximately 10,000 lineal feet of heavy timber piles. Approximately 193,000 cubic feet of timber was used for purposes other than piling. Concrete works incorporated some 35,000 tons of cement.

These details represent the effort of the British organisation (which was responsible for about 75 per cent. of the total Allied effort) from September, 1943 (at the time of the initial landings in the toe of Italy) up to the end of January, 1946.

The British organisation comprised railway troops from the United Kingdom, South Africa, and India, with detachments from time to time of other Dominion forces. This force was assisted by Pioneer companies from the United Kingdom, the Dominions, India, and the Colonies, and Italian railway construction and infantry units. The total force was augmented by civilian labour recruited locally. A typical figure of the numbers on works on a particular day showed a total of 6,000 British or Empire personnel; 4,500 Italian military personnel, and 6,600 Italian civilian labour. After the Armistice in May, 1945, German prisoners were brought in to assist in the railway reconstruction programme, mainly in the Brenner Pass area.

A comprehensive and fully-illustrated book, showing the railway reconstruction effort in Italy, is in course of preparation. I hope it will be ready in a few weeks' time, when I will send you a copy.

Perhaps you would care to publish the enclosed photograph showing the British members of the Military Railway H.Q. staff as they were constituted in 1944.

R. D. WAGHORN

Brigadier,  
Director, Military Railway Service, Italy

## Publications Received

**The A.B.C. or Alphabetical Air Guide.** London: Thomas Skinner & Co. (Publishers) Ltd., 330, Gresham House, E.C.2. 8½ in. x 5 in. Price 2s. 6d.—The first separate issue of *The A.B.C. Air Guide* was published during the first week in June, and thereafter it is to be issued monthly. It is under the same auspices as the London *A.B.C. Railway Guide* (established 1853) and is arranged in a similar way, at any rate so far as the first section. This is an alphabetical world gazetteer informing the user how to reach a place from the United Kingdom, with times, fares, and baggage details, where direct services exist. The second part consists of numbered time-tables, in which are shown the times, principal fares, and baggage charges of the main airways and important branch services. A prefatory section gives such general features as rates of exchange, a world time calculator, and health and passport regulations. The June issue is numbered 146, as it incorporates *The A.B.C. of Air Services*, which was established in 1934. For some months

past *The A.B.C. Air Guide* has appeared in skeleton form at the back of *The A.B.C. Railway Guide*.

**War on the Line.** By Bernard Darwin. London, 1946. The Southern Railway Company: 8½ in. x 5½ in. 215 pp. Illustrated. Price 7s. 6d.—This book forms an illustrated history of the contribution made by the Southern Railway to the war effort, beginning with Dunkirk and carrying the story on to the transport of the invading armies on D-day four years later, with all the subsequent problems of ensuring their supplies, mails, leave trains, and the transport of wounded and prisoners of war. All the time, of course, the Southern Railway itself was in the front line, subjected to air attack and all the operating complications arising therefrom. "War on the Line" is reviewed fully in an editorial article on another page this week.

**Westinghouse A.C. Voltage Stabiliser: "The Stabilistor."**—We have received from the Westinghouse Brake & Signal Co. Ltd. a copy of a publication—No. E.E.2—devoted to the "Stabilistor," which has

been designed by this firm to overcome several disadvantages associated with various makes of voltage regulating transformers. The booklet comprises 17 pages and has useful diagrams and tables, as well as illustrations.

**The "Hi-Shear" Stop Pin.**—We have received from Simmonds Accessories Limited, Brentford, London, a folder illustrating a new development known as the "Hi-Shear" stop pin, which has been designed for use in aircraft structural work and is intended to provide a solution to the problem of resistance to high shear loads. One feature of the pin is the ease with which it can be handled and the regularity with which uniform well-formed heads can be made. It is claimed that the shear strength value equals that of a high tensile steel bolt of similar diameter. Fewer stop pins are required than mild steel bolts, thus saving space, time, and cost, and they are made in standard bolt sizes, which permits interchangeability. The weight is approximately one-third of a nut and bolt assembly.

## The Scrap Heap

To make the utility boards independent of Parliamentary criticism and control is to impose national monopolies without the safeguard of democratic Parliamentary check.—Mr. G. W. Morris, President, Post Office Workers' Union.

Since January 31, 124 G.I. brides and their babies have passed through the reception camp at Tidworth. The majority arrived by train, and all travelled from the G.W.R. station en route for the ports.

### 100 YEARS AGO

From THE RAILWAY TIMES, June 27, 1846

TO BROAD-GAUGE SHAREHOLDERS.

Now ready, price 6d.

**THE BROAD GAUGE THE BANE OF THE GREAT WESTERN RAILWAY COMPANY.** With an account of the present and prospective liabilities saddled on the Proprietors by the promoters of that peculiar croquet. By "E. S. D."

"A barbe de fol, on apprend a raire."  
[Which, being translated for the benefit of country gentlemen, means]—  
"Mr. Bernel has learnt to shave on the chin of the Great Western Directors."

London, John Ollivier, 59, Pall Mall.

Just published, price 6d.

**NATIONAL UNIFORMITY OF GAUGE.**—A short Letter to Lord Dalhousie, submitting Reasons for preferring the original recommendations of the Gauge Commissioners to the recent proposals of the Board of Trade.

Published by W. Stephenson, 12 and 13, Parliament-street.

**A COMMERCIAL VIEW OF THE GAUGE QUESTION.**

**A LETTER TO THE DIRECTORS OF THE GREAT WESTERN RAILWAY COMPANY,** showing the public evils and troubles attendant upon their break of gauge, and pointing out the Remedy. By an Old Carrier.  
Manchester: Bradshaw and Blacklock, Brown-street; and all Booksellers.

**FREE TRADE FOR THE HOME TRADE.**

Just published, in 1 vol. imperial 8vo. Second Edition, enlarged and revised, price 5s. cloth lettered.

**HISTORY AND PROSPECTS OF THE RAILWAY SYSTEM,** illustrated by the Evidence given before the Gauge Commission. By Samuel Sidney, author of "Bristol a Free Port," &c. With a Map.  
Edmonds, 124, Strand; and Vacher, Parliament-street.

Just published, price 6d.

**A LETTER TO GEORGE CARR GLYN, Esq.,** Chairman of the London and Birmingham Railway, on the Jeopardy to which the Interests of that Line are exposed, by the Parliamentary Resolutions of the House of Commons reversing the Gauge Commissioners' Report. By a Proprietor of the London and Birmingham Railway.  
London: Richard Reid, 15, Charing Cross.

### "Golden Arrow" Crews Exchange Greetings



Above: Guard Tow of the "Golden Arrow" and Guard Craf of the "Flèche d'Or"

Left: The two train crews at Calais

### 2,073,134 BY TUBE

More passengers than in any previous 24-hour period were carried on London Underground on Victory Day when 2,073,134 persons used the railway. The previous record, 2,017,334, was set up on Coronation Day, May 12, 1937, when the London bus strike diverted many travellers to the Underground.

### WHY?

Why do trains get delayed?

Trains get delayed because of overcrowding. Passenger miles on the railway are up by 70 per cent. over pre-war and the traffic has to be carried with 30 per cent. less train mileage. Loading of trains—yes, we know they're crowded—is up by 140 per cent. The increased number of carriages, the amount of postal traffic (which has increased by 150 per cent.) both contribute to the slower running of trains. This slower running reduces the turn round of stock and frequently two sets of carriages have to be used in place of one.—From "The L.M.S. Answers Your Questions."

### Praise pays two ways!

When you see someone doing a good job, why not say so? Say it to him. Say it to others. Because praise pays two ways. It encourages fellow workers to do their best, and it helps you to get ahead as a likeable, constructive member of the transportation team.

[From "Company Manners" issued by the New York Central System]

An express from Kings Cross to Aberdeen was stopped at Hitchin, Herts, recently to let off a young mother and her baby. The mother was seeing friends off and was aboard when the train started. She had no food for the baby. They returned to London by train.



"You and your perishin' slow oven—we're nearly an hour late already"

[Reproduced by permission of the proprietors of "Punch"]

### NON-STOP QUEUE

Nearly 300 people queued at Victoria Station, Southern Railway, to obtain tickets to the Channel Islands, which came off the priority list at 8 a.m. on June 4. They began to congregate at tea-time on May 31. Posters announced that there would be only 150 tickets in the first batch, but many people queued for a place in the queue for the second, or even the third, allocation on subsequent days. A train of empty coaches had been stabled in platform 15 to provide sleeping accommodation, and the railway police issued numbered slips so that the queuers could form up again in their proper order in the morning. The tickets are for sailings 28 days ahead of the date of issue.

My Paddington porter, talking as we waited for the Torbay express, was cynical. His subject, queue complexes.

"Even if there is no order for passengers to queue, you see them go like sheep to start a queue outside the platform," he said.

"Meanwhile, the people with more enterprise just walk straight on to the platform."

"Same with taxis. Passengers go automatically to No. 8 to queue, like they did in wartime. Yet there are plenty of taxis."

—From "The Daily Express."

### EXPORTS AND IMPORTS

Mr. H. A. Marquand, M.P., Secretary for Overseas Trade, speaking at the inaugural meeting of Scientific Exports (Great Britain), said that for every pound's worth of goods imported to Britain in April, 16 shillingsworth was exported.

It was urgently necessary to close the gap between exports and imports. We must pay pound for pound for the goods we need in order to live, and when we have done that we must export still more to pay for debts and certain other services.

Out of every pound's worth of imports, 10s. 6d. represented foodstuffs, 6s. 6d. consisted of raw materials and industrial equipment, 1s. 6d. was for petroleum, 1s. went in tobacco, and the remaining 6d. covered all the rest.



## OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

### SOUTH AFRICA

#### Railway Estimates

The post-war re-equipment of land, sea, and air transport services in the Union is reflected in the estimates of expenditure on capital and betterment works of the South African Railways & Harbours for the year ending March 31, 1947, which the Minister of Transport, Mr. F. C. Sturrock, laid on the table of the House of Assembly on May 17. The total estimated expenditure of £14,226,582 from loan and betterment funds is nearly double that of £7,849,033 last year.

#### New Lines

Only £334,127 is to be spent this year on the construction of new railways, as against £453,059 last year, which represents a decrease of £118,932. Of this sum

to £418,883. The amount allocated from loan and betterment funds for new stations is £231,908, leaving £2,105,214 still to be spent. For the electrification of the Umlaas Road—Pentrich line in Natal, £33,420 has been provided. The total estimated expenditure on all classes of new rolling stock is £2,134,381 from loan and betterment funds, and £7,156,042 from renewals fund and working votes.

#### Free State Developments

Well over £250,000 is to be spent in the Orange Free State by the South African Railways during the next twelve months on the construction of new lines, new works on existing lines, and improvements and additions. Of the £421,059 ultimately to be spent on the new railway from Whites to Odendaalsrust, an amount of £60,000 will be spent in the year ending

March 31, 1947. A sum of £20,000 will be spent during the same period on doubling the line and improving the curvature between Van Tonder and Bosrand, an undertaking which will ultimately cost £1,550,000 and on which £10,000 was spent up to March 31, 1946. Of the £1,500,000 set aside for additional workshops and improvements at Bloemfontein, only £10,000 is to be spent this year. A further £5,000 is to be spent on workshop buildings. For long-distance wireless communication from the Free State capital, £15,100 has been provided, of which just under a third will be spent before next March. Telex equipment and terminal amplifiers for Bloemfontein will cost about £28,700, but only £100 of this amount is to be spent during the forthcoming year.

Close on £29,000 will be spent this year on new stations. Over £9,550 will be spent on improving the locomotive depot at Kroonstad. At Bethlehem the locomotive layout is to be improved at a cost for this year of over £4,000, and a similar amount is to be spent at Burgersdorp.

#### Cape Western System

The total estimated cost of the electrification of the Bellville-Touws River line, including the Stellenbosch loop, is £1,588,400, and £175,000 has been allo-

#### Natal Improvements

It is proposed to spend £33,450 on electrification of the railway between Umlaas Road and Pentrich, via Thorneville, and £7,000 on the electrification of the Rossburgh—Hillcrest line. The line between Durban and Booth is to be quadrupled and provided with flyover junctions, at a cost of £376,500, of which £25,000 is to be spent this year. The line between Isipingo and Umbogintwini is to be doubled at a cost of £65,000.

A big programme for doubling the line and improving curvature in the Natal Midlands between Broughton and Umbulwana will be begun with an initial expenditure of £26,000. The total estimated cost of this work is £2,115,000. A sum of £100,000 is to be spent on the marshalling yard at Durban, and £53,000 on relaying and strengthening track in Natal.

### Train-Wrecking on the Palestine Railways



Removing a wrecked underframe from the scene of an attack



Wreckage of a composite passenger coach and brake van which were set on fire by terrorists

£224,127 is to be spent on the Transvaal systems and £60,000 on the new Orange Free State goldfields railway from Whites to Odendaalsrust. The expenditure on new lines in the Transvaal is apportioned as follows:—

The sum of £5,000 is to be spent on the prevention of soil erosion, to be distributed among all systems out of the £50,000 voted by Parliament for this purpose. An amount of £163,436 out of a total estimated cost of £1,435,119 is to be spent this year on safety measures at level crossings. Great progress will be made in extending the carrying capacity of the railways as represented by goods rolling stock in the form of new wagons and cranes to the value of £3,786,962. Under the heading of new works on open lines more than £3,000,000 is to be spent this year on the Transvaal systems from loan and betterment funds, the renewals fund, and working votes.

#### Additions and Improvements

The amount provided for railway additions and improvements is £1,209,471, most of the individual amounts being further instalments on work already begun. Another £100,000 is provided for the central training institute at Esselen Park, bringing the total estimated expenditure for the year

Deviations and regrading will account for £93,547 this year.

### PALESTINE

#### Attacks on Trains

After a short lull railway sabotage has broken out again. On the evening of June 10, three passenger trains were held up simultaneously and wrecked by armed gangs in the Lydda district. The train from Jerusalem to Jaffa was held up between Sarafand Junction and Tel Aviv. The driver and passengers were forced to leave the train at revolver point, after which bombs were placed under the engine and the coaches set on fire. The engine suffered minor damage, but the coaches were completely gutted, with nothing left but the steel underframes. The passengers walked to their destination.

The train from Jaffa to Jerusalem was similarly held up about three miles outside Tel Aviv. Terrorists, some of them disguised as Arabs, were travelling on the train. They pulled the communication cord to make the train halt and were immediately joined by other armed men who were lying in wait. The driver and passengers were forced to leave the train, after which bombs were placed under the

engine and the coaches were set on fire. The engine was slightly damaged, but the coaches were completely destroyed. The passengers were conveyed by bus to Jerusalem.

The third hold-up took place near Ras El Ein on the Lydda-Haifa section. Bombs were placed under the engine, which was extensively damaged. No attempt was made to damage the coaching stock. The passengers returned to Lydda, where arrangements were made for their conveyance to destination by buses.

The damage caused to the engines, coaches, and track is estimated at £100,000. Slight injuries were sustained by three Arab constables who were on guard on the trains, and by a member of the travelling public.

## RHODESIA

### Railway Operations in 1945

Earnings of the Rhodesia Railways declined sharply in 1945 to £6,945,900, as compared with £7,406,900 in 1944. Gross operating expenditure showed a slight increase, and the net revenue of £2,589,500 was lower than at any time since 1939. Passenger traffic during the year increased slightly to £686,820, mainly as a result of a larger number of native travellers, amounting to 1,754,222 against 1,678,286 in 1944. In the same period the number of first, second, and third class passengers declined to 384,524 from 412,615. Further decreases in second and third class traffic occurred in January this year, but first class passengers showed an increase from 7,955 to 8,010, and native passengers from 135,188 to 141,643.

Operating statistics of the Beira and Rhodesia Railways in 1944 and 1945 on the lines north of Bulawayo are compared below:—

	1945	1944
Tons carried	4,205,590	4,420,964
Train-miles	6,624,748	7,158,423
Train engine-hr.	397,622	430,436
Train-miles per train engine-hr.	16.66	16.63
Gross ton-miles	4,211,185	4,648,041
Net ton-miles	1,922,002	2,175,569
Per cent. net ton-miles to gross ton-miles	45.64	46.8
Average wagon load, tons	28.5*	28.21*

\* Twelve months ended September 30

The section of the Rhodesia Railways running southwards from Bulawayo to Vryburg is operated by the South African Railways & Harbours Administration.

## INDIA

### Proposals to Meet Wage Demands

A meeting of the Standing Finance Committee for Railways was held on June 10 to consider the effect on railway finances of the demands put forward by the All-India Railwaymen's Federation (reported in *The Railway Gazette* of June 21). The Indian press has given prominence to the suggestions of the federation for making funds available for their demands. The federation suggests the following measures:—

- (1) Transferring a sum from the depreciation fund.
- (2) Reducing interest charges on capital.
- (3) Charging the expenses of the N.W. strategic lines to the Defence Department.
- (4) Discontinuing "concessional" rates for military traffic.
- (5) Reducing the salaries of railway officers.

These suggestions have been criticised by the Railway Board as below:—

- (1) Raiding the depreciation fund to any appreciable extent would most likely prove to be disastrous, but the report of the Standing Finance Committee on this point will be taken into consideration.
- (2) Reduction of interest charges on capital

would result in money having to be found from general revenues to make up the difference.

(3) The loss on strategic lines is charged to general and not to railway revenues.

(4) Discontinuance of "concessional" rates for military traffic would be only of academic interest in view of the heavy reduction in the volume of such traffic.

(5) If railway officers were to be paid an average of Rs. 500 a month instead of Rs. 1,100, as at present, Rs. 1.3 crores would be saved a year at the expense of railway efficiency.

The Government of India maintained contacts with the major political parties in the country, and the Viceroy had consultations with Pandit Jawaharlal Nehru and Nawabzada Liaquat Ali Khan in connection with the impending strike. It was announced on June 18 that the Government had agreed to appoint a committee of the Central Legislative Council to review the working of the Railway Convention, which regulates conditions of employment on the railways.

### Strike Notice Cancelled

The General Council of the All-India Railwaymen's Federation met in New Delhi on June 20, when it was decided to direct the railway unions to withdraw their strike notices. The council issued a resolution observing that the interim relief offered by the Government fell far short of the railwaymen's legitimate demands. Before agreement was reached, the federation requested clarification of certain points concerning post-war scales of pay and employment of surplus staff.

## VICTORIA

### Demonstration Sleeping Car

A demonstration sleeping car is being built in Adelaide in order to test public preference for various types of accommodation before new stock is constructed for the Melbourne-Adelaide expresses, which are operated jointly by the Victorian and South Australian Railways. The demonstration car will be exhibited in Melbourne and Adelaide. It will have five styles of compartment, namely: a "roomette," with single folding bed convertible into an upholstered seat for day use, and private washing facilities; a two-berth compartment with partitions for converting it into two single berths; and two *de luxe* compartments with chairs, wardrobe, and shower bath.

As some of the earlier sleeping cars on the Melbourne-Adelaide service become due for renewal, consideration will be given to converting them as second class cars to test public demand for this type of accommodation.

### Meal Service on "Spirit of Progress"

There has been a steady increase in the number of meals served on the "Spirit of Progress" express between Melbourne and Albury. It is now necessary to have five sittings for dinner, and the average number served daily from July 1, 1945, to March 9, 1946, was 207, as compared with 100 in 1939-40. Breakfasts have averaged 236 a day in 1945-46, surpassing by 18 meals a day the maximum of 1943-44.

## UNITED STATES

### Call for Through Services via St. Louis

Another system, the Chesapeake & Ohio, has been publicising the need for co-operation between railways running into St. Louis so that through services can be operated between eastern cities, particularly Washington, and Texas. The C. & O. points out that the situation should be easier at St. Louis than at Chicago, where

through east-west communication has already been established, because St. Louis has a joint terminal station. A statement by the Atchison Topeka & Santa Fe on the same matter was reported in *The Railway Gazette* of June 14.

### Acceleration of Panama Limited

The schedule of the Panama Limited between Chicago and New Orleans was speeded up by one hour in both directions on June 2. This new 17-hr. schedule of the Illinois Central streamliner is the fastest train time ever scheduled between New Orleans and Chicago. The running time in both directions between St. Louis and New Orleans has been reduced to fifteen hours, also the fastest ever scheduled. By means of improved connections at both ends of its run, the Panama Limited now provides approximately 24-hr. service between Minneapolis-St. Paul, and New Orleans, and between south Texas points and Chicago.

## FRANCE

### Improvements on Paris Metro

Improvements in the Metropolitan Railway train services will be on a more moderate and less sensational scale than has been reported recently, says *Le Monde*, a leading Paris journal. At present the improvements are limited mainly to certain changes in the ventilation of tunnels and in signalling. Later in the year, the enlargement of passages to relieve congestion at certain stations will be undertaken, and carried to completion in 1947. At a more distant period, plans will be tried for running train units of one, two, or three carriages at certain hours of the day and on certain lines, attaining increased speeds by more rapid acceleration and deceleration.

It is also expected that the Metro surface bus lines will receive more vehicles, recovered from various parts of France, Belgium, and Germany. There are about four hundred in view, which will be put into service as soon as repaired. Later, the Metro may acquire new buses, but it is stated that buses of the London type with seats on top are not adapted to Paris conditions, as they lose too much time at the stops.

## SWITZERLAND

### Kreuzlingen-Romanshorn Electrification

After an opening ceremony on May 4, regular electric service was introduced between Kreuzlingen and Romanshorn (11½ miles) on May 6. There is now, therefore, continuous electric traction along the shores of Lake Constance from Kreuzlingen to Rorschach, the section between Romanshorn and Rorschach already being electrified. These sections form part of the Swiss Federal Railways line from Schaffhausen to Rorschach. At the western end of the line, the section between Schaffhausen and Etwilen (10½ miles) was electrified on December 15, 1945, as recorded in *The Railway Gazette* of March 22. Stations on the Kreuzlingen-Romanshorn section have been rebuilt in varying degrees according to traffic requirements, and a new halt has been opened at Bottighofen. Work is proceeding on signalling improvements. Kreuzlingen is being re-signalled with colour-lights and will be provided with electric interlocking. Other stations are to have three aspect colour-lights working in conjunction with additional arms on the existing two-aspect semaphores. A new timetable has been introduced, providing four extra trains in each direction and shortening journey times by up to 9 min. in spite of the additional stop at Bottighofen.

## New American Passenger Coaches\*

### *Characteristics in design of 1946 stock*

THE background for the coaches scheduled for delivery in 1946 began with the advent of the modern lightweight streamline passenger coaches in 1934 and 1935. In the early designs great emphasis was placed on the reduction of wind resistance. Wind tunnel tests had demonstrated the relative unimportance of cross-section dimensions so far as wind resistance was concerned.

In 1940 the Association of American Railroads adopted a standard cross-section contour, 10 ft. wide over side posts and 13 ft. 6 in. from rail to top of roof. These dimensions would prevail in the 1946 coaches.

Minimum structural strength requirements for new passenger coaches were established by the A.A.R. specification of March 24, 1939. As a result of injury to passengers and damage to equipment under some unusual wreck conditions there had arisen requirements by some railways considerably exceeding those of the A.A.R. specification. The economies resulting from light weight were so important that the majority of the new cars probably would be designed to the A.A.R. specification as a minimum with additional strength resulting from the use of available standard sections.

The stress analysis for coach framing members was made readily by the use of well-known and generally accepted formulae, with the possible exception of the centre sill. The centre sill could not be considered as a continuous beam with fixed supports because of the flexibility of the sill itself and the cross-members which transferred the reactions to the sides and other parts of the structure. Centre sill area properly distributed in the cross-section was of major importance. No new basis structural materials were likely to be used in the 1946 coaches. The materials used before the war, and which would continue to be used, were mild carbon steel, copper bearing; low-alloy high-tensile steels; stainless steels; aluminium alloys.

### **Economic Standpoint**

As the total weight of the material in the structural shell was only from 25 to 35 per cent. of the total weight of the completed coach, the percentage of total weight which could be saved by the use of light high-strength materials and careful design was somewhat limited. Low-alloy high-tensile steel construction was the material preferred from an economic standpoint. A considerable number of the new coaches would use aluminium alloys for a major portion of the framing members as well as for inside finish and fittings.

The 1946 coaches would be of three types as regards exterior appearance—shiny unpainted; painted; combination of shiny and painted.

Of the vehicles scheduled, not including sleepers, third class coaches considerably outnumbered those of other types. In the luxury coaches such as diners, lounge and parlour cars they would see examples of the ultimate in decorative features, and in new facilities such as private rooms, cocktail lounges, and motion pictures, and even

space for dancing and children's playrooms was being offered. The third class coaches would have fewer radical innovations, but would include many refinements—more comfortable seats, improved lighting, wider vestibules, end doors and passageways, improved luggage stowage arrangements and ample toilets. Increased attention was being given at the present time to details contributing to easy cleaning and maintenance.

There would be wide variety in the 1946 coaches, not only in those for different services, but even in those of the same type. Standardisation, however desirable from a production standpoint, should not be maintained to the point of stifling progress.

Regardless of the plan followed, the need for new equipment was clearly indicated by the fact that about 50 per cent. of existing passenger stock was more than 25 years old and only about 4 per cent. was less than 10 years old. Hence the 1946 models were likely to be only the beginning of a construction programme extending over several years.

### **The Discussion**

Mr. H. F. McCarthy, Executive Assistant to the President, New York, New Haven & Hartford Railroad, said that the great departures of pre-war years seemed to be merely refined in the 1946 models. The exterior appearance of the early streamline trains was an entering wedge to attract and demonstrate the more significant improvements. Surveys had indicated that the public preferred, and would accept more easily, a coach with liberal use of natural metal finish.

They had to provide safety which exceeded that which could be attained by an individual in any surroundings of life except that of "home in bed." They had to provide greater comfort and luxury than the average individual could secure in his own home and the price for that comfort and speedy transport had not to exceed their present rate levels. Bogie research and the problems of bogie design had to be carried much further. The air-conditioning in the 1946 models ought to be the best that could be devised. Lighting, elimination of noise, and baggage handling were other problems requiring solution.

Mr. P. W. Kiefer, Chief Engineer, of Motive Power & Rolling Stock, New York Central System, expressed the view that moderate streamlining, with appropriate external colour and related treatment, had a distinct public appeal. The railways within reasonable and practical limits should take advantage of it. A number of important factors entered into the decision as to whether stainless steel, aluminium, unpainted or painted surfaces, or combinations of both should be used, especially where complete trains were involved. The railways had to apply unceasing efforts to provide low cost passenger transport and make it popular, regardless of the difficulties inherent in the constantly rising operating costs of all kinds and the high initial investment in new rolling stock.

He mentioned some of the considerations involved in the improvement of luggage handling facilities. With regard to comfort and safety, constant improvement in riding qualities was essential.

He believed that in the main the individual builder's standardisation work

should be confined largely to his basic car body. Among the builders collectively, it appeared that body standardisation limited to overall dimensions and contour lines would result in obtaining the greatest individual returns from their own ingenuity and research.

Mr. Frank L. Murphy, Chief Engineer, Pullman Car Manufacturing Company, pointed out that the A.A.R. specification permitted considerable latitude to the designer in fabrication details, and particularly in the method of joining. Passenger comfort could be provided in greater or less degree by several factors, but no matter how beautiful the train might be in its interior appointments, the trip would not be enjoyed unless the train provided easy riding qualities. He believed that the railways ought to take a keener interest in bogie development. The problem of handling baggage in coaches had not been solved.

Colonel E. J. W. Ragsdale, Chief Engineer, E. J. Budd Manufacturing Company, said that he found too much emphasis on the thought that much of the new equipment would be spectacular and novel. The Astra-Dome was one novel feature which did not need to come in the category of "added excitement." A very small percentage of equipment items caused a disproportionately large percentage of maintenance. Why should they not concentrate on those items and cut down the need of maintenance? He wished someone would form an Anti-Outer Diaphragm Society. In the matter of materials there seemed to be a use for everything in its place, and price alone should not determine where it should go.

Mr. K. F. Nystrom, Chief Mechanical Officer, Chicago, Milwaukee, St. Paul & Pacific Railroad, mentioned that he was one of the three engineers who had designed the first Pullman sleeper in 1909 and 1910.

He believed that they could build a coach which would weigh not much over 100,000 lb. Colonel Ragsdale had advocated an anti-diaphragm league; in the 1946 coaches, the Milwaukee Railroad was going to eliminate the outer diaphragms. In the last ten years the Milwaukee had built about fourteen or fifteen experimental passenger bogies and was going to build another.

Mr. D. C. Turnbull, Executive Assistant, Baltimore & Ohio Railroad System, commented on the fact that the design of the coaching stock used by season ticket holders had not been mentioned. The equipment was usually discarded equipment designed for another purpose, was poorly maintained, was not kept clean and therefore gave the railways in general a bad name. In dining car facilities the railways could and should be far ahead of their competitors. Tomorrow's trains on the exterior and interior had to express modernity, safety, cleanliness, comfort and convenience at the right price to attract and satisfy a sufficient number of passengers.

### **Reducing Bogie Weights**

Mr. James C. Travilla, Chief Mechanical Engineer, General Steel Castings Corporation, mentioned the work that was being done to reduce bogie weights—cutting down wheelbase, using carbon steel and smaller roller bearing boxes. Experimental work on new bogies was being carried out with the railways and he thought they could expect better riding. If they had to have a lighter and better riding bogie, the chances were that it would cost more unless they could get quantity production through standardisation of parts.

\* Abstract of an address, "Railroad Passenger Cars—1946 Models," by Mr. Allen W. Clarke, Assistant General Mechanical Engineer, American Car & Foundry Company, to the American Society of Mechanical Engineers.



## Power-Driven Hand Tools for the Civil Engineer's Department—5

*An electric hammer drill which is readily adaptable for several other workshop applications*

AMONG the various types of electric hand drill shown at the L.N.E.R. Kings Cross small tools exhibition a short time ago, was the Climax Wodack Do-All hammer drill illustrated herewith. The tool is made by the Climax Rock Drill & Engineering Works Limited, 4, Broad Street Place, London, E.C.2. The hammer member permits the drill to bore in concrete, brick, or masonry, or by removing the hammer member and replacing it with a chuck, the tool can be converted within a minute into a rotary electric drill. The same chuck will accommodate tools for grinding, scratch brushing, or buffing, the changeover being effected in a few seconds by the use of a key which opens the chuck jaws to permit removal of the bit and substitution of the tool required.

Using the hammer member, the drill will bore 1½ in. holes in concrete, brick, or masonry, enabling expansion bolts to be fixed in a fraction of the time taken by hand methods. A clean hole 3 in. deep can be bored in dense concrete in one minute. The motor operates on single-phase a.c. or d.c. mains, and can be supplied for inputs of 110 V. d.c., or 110 V. and 230/250 V. a.c. A large fan

on the armature shaft and adequate intake and exhaust holes permit continuous operation for long periods without overheating. Apart from periodical greasing of the bearings, and inspection to ensure that the ventilation holes and ducts are not clogged by dirt, little attention is required. The hammer strikes 1,400 b.p.m. on 110 V. d.c. supply, and 1,600 b.p.m. on 230/250 V. a.c. The unit construction of the hammer member eliminates nuts, bolts or screws, and therefore the possibility of parts working loose under the slight vibration which is present in all hammers.

When used as a rotary drill, the Do-All will drill any size holes up to 7/8 in. dia. in steel and all other metals, and up to 1 in. dia. in wood.

In addition to the star drill and tamping tool which are used with the hammer member for drilling in concrete, brick, masonry, etc., buffing, scratch-brushing and grinding wheels, Rawplug drill holders, sanding discs, and riveter snaps can be used in the rotary drill chuck. A stand can be supplied so that the tool can be bench-mounted when using the grinding wheel and other wheel attach-



*Removing the hammer unit to convert the tool into a rotary electric drill*

ments. The drill unit itself weighs 12½ lb., and the weight of the drill complete with hammer unit is 17½ lb.

## Handling of Sugar Beet Traffic

*Mobile elevators facilitate road-rail loading*

THE Great Western Railway has been associated with the development of the sugar beet industry from its infancy, but, although it conveys beet roots regularly to many factories, its main activities

are in connection with those at Allscott and Kidderminster, both of which are rail connected. During the past four seasons the company has conveyed over 800,000 tons of beet to these factories, mainly from Shropshire, Montgomery, Worcestershire, Gloucestershire, Staffordshire and Glamorgan. Close contact is kept throughout the season with the growers and factories in order to maintain a steady flow of beet to the factories from the beginning of the autumn harvesting season.

Although the company has developed to a limited extent the use of high-level loading banks for discharging road vehicles to rail wagons, the use of elevators appears to be a preferable method of loading, but, until recently, such machines were not sufficiently mobile to permit easy and speedy movement in station yards or between roadside beet dumps and stations. Last year, however, the Wolseley Sheep Shearing Machine Company, of Witton, Birmingham, introduced a light mobile elevator, and after minor modifications were made to the design as the result of strenuous tests, the G.W.R. bought some of the machines for use during the next harvesting season.

The machine is driven by a Wolseley 1½-3 h.p. water-cooled petrol engine, and

its main chassis and elevator frame are of pressed steel, welded construction; the wheels are fitted with 19 in. by 4 in. pneumatic tyres and the total weight is approximately 11 cwt. An adjustment of elevation from a loading height of 9 ft. to 12 ft. from ground is made by a simple hand crank.

The load is not conveyed by endless belt as is the case with many similar appliances. The ramp is entirely rigid and the load is propelled by a series of T iron slats, spaced at intervals between two main endless driving chains and passing over the bed of the ramp from the base to the apex.

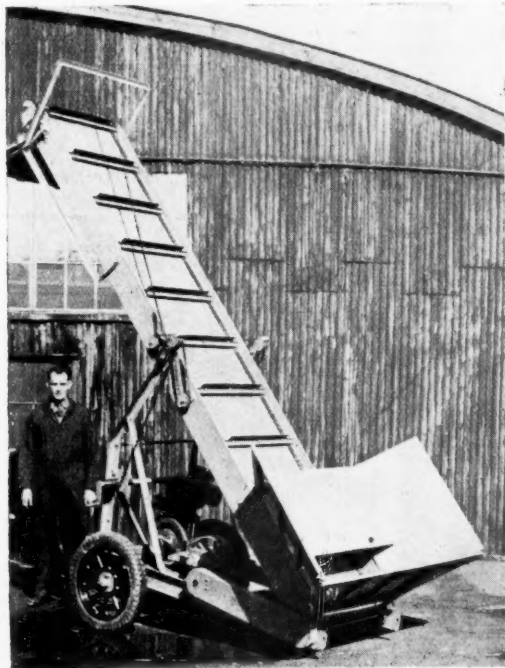
The roots are tipped or shovelled from the road vehicle into a hopper located at the base of the elevator ramp, drop automatically to the conveyor bed, from which they are lifted up a 14-ft. ramp, and are thus precipitated into the truck.

### Shifting Belt Drive

The drive from the engine to gear box is by a shifting belt working on fast and loose pulleys. This provides not only an efficient and simple clutch, but acts also as a safety device; should the elevator bars become jammed by any object, the belt will slip and avoid a break in the transmission.

The reduction gears are sealed from dust or dirt and run in an oil bath. The heavy duty driving chain from gear box to elevating shaft is enclosed by a guard chain. Reynolds steel roller chains are used.

The elevator is light enough to be manoeuvred by one man and will pass through a space 4 ft. 8 in. wide and 6 ft. 6 in. high. It can be towed behind any normal type of road vehicle between station and beet concentration dump, and is capable of handling sugar beet from road vehicle to railway truck at about one ton in seven minutes. Its use will considerably facilitate and cheapen loading operations.



*Light mobile elevator for sugar beet traffic*

## The "Liberation" 2-8-0 Type Locomotive with Double-Bogie Tender for European Use

*A detailed account of the Vulcan Foundry's design for international service on the Continent*

IN our March 15 issue was given a brief general description of the Vulcan Foundry 2-8-0 "Liberation," one of the most remarkable designs of locomotive ever developed in this country, and we remarked on the patience, understanding and engineering ability that were needed to transmute the abstract requirements of seven countries into the finished engine.

The origin of the design is interesting. It owes its beginning to the Technical Advisory Committee on Inland Transport (T.A.C.I.T.), a body consisting of members of the British & Allied Governments in London, charged with responsibility for the re-organisation of Continental transport as soon as the rehabilitation of Europe could begin. It speaks well for the foresight of this committee that preliminary consideration was given as early as 1943 to the possibility of a really "international" locomotive design which could be used in overcoming the probable shortage of motive power on the Continent after the war.

The Advisory Committee accordingly requested the Ministry of Supply, the appropriate British Government department, to proceed with these plans; but the Ministry's part was chiefly to act as a liaison between the Committee and the specialists—in the form of the Locomotive Manufacturers' Association—which it called in to advise on the fundamental requirements of the design. The Vulcan Foundry is one of the constituent members of the L.M.A., and it was decided that this firm should be entrusted with the preparation of the preliminary drawings.

### For Universal Use

It was considered that the locomotive should be more powerful than the 2-8-0 austerity locomotive then being built for the War Department, but should nevertheless be suitable for universal use on the standard-gauge railways of Europe. A tractive effort of 40,000-50,000 lb. was recommended, together with a boiler having a wide firebox, the grate area of which was to be 40-50 sq. ft.; an axle load of 18 tons was envisaged, and a wheel-base suitable for curves of 100 metres (330 ft.) radius. Both engine and tender were to be built within the limitations of the Berne International Railway Gauge.

Because of the need for conserving labour to the greatest extent, it was realised that, although it was desirable that the design should conform as far as possible to the practice of the various Continental countries, it was essential that only one type should be built and that it should be relatively easy to manufacture from materials available in this country. Moreover, because of the probable lack of repair facilities on the Continent in the immediate post-war period, the locomotive should be as simple in design as was consistent with good performance; ease of maintenance and repairs should receive primary consideration.

Accordingly it was agreed that (except for fittings of proprietary make where it was felt essential to retain manufacturers' standards) all details of the locomotive should be designed to metric dimensions and all machined and replaceable details should be manufactured to the International Standards Association system of tolerances to ensure interchangeability of

detail, and to facilitate the production, supply, and fitting of spare parts.

At this stage the designers were in the unusual position (as far as private locomotive builders in this country are concerned) of being free—in the absence of a detailed specification—to incorporate into their design those features of locomotive practice which they considered to be the most suitable. As a result, items designed in accordance with the best British, Continental, and American practice were included, the fitness of any component being the primary consideration, irrespective of the country of its origin.

With remarkable speed, preliminary designs and specifications were prepared, embodying these features, and were submitted to the Technical Advisory Committee on Inland Transport of the Allied Governments, whose members were drawn from railway representatives of France, Belgium, Holland, Czechoslovakia, Poland, Yugoslavia, and Greece. This Committee was given every opportunity to discuss the design in detail, and only in minor respects was it necessary to modify the design submitted. The final designs were quickly agreed, and the preparation of manufacturing drawings began late in 1944.

The main features of the final design are shown in the accompanying illustrations. Whilst exhibiting British design features, for example, in the retention of plate frames, many features of Continental and American practice have been introduced, resulting in a locomotive which, although in some respects of uncommon appearance (compared with locomotives in this country) nevertheless should prove capable easily of doing the work for which it was designed and should also be relatively easy to maintain, because of the care taken to ensure accessibility to all items needing inspection and renewal.

The principal dimensions of the locomotive, in English and metric units, are:—

	Metric	English
Cylinders (two), dia. x stroke	550 mm. x 710 mm.	21½ in. x 28 in.
Coupled wheels, dia.	1,450 mm.	4 ft. 9½ in.
Pony truck wheels, dia.	850 mm.	2 ft. 9½ in.
Wheel-base, coupled	4,950 mm.	16 ft. 3 in.
" total engine	7,660 mm.	25 ft. 1½ in.
Working pressure	16 kg. per sq. cm.	227 lb. per sq. in.
Heating surface:—		
Tubes and flues	194.33 sq. m.	2,098 sq. ft.
Firebox	16.26 sq. m.	175 sq. ft.
Total evaporative	210.59 sq. m.	2,273 sq. ft.
Superheater	61.30 sq. m.	660 sq. ft.
Combined total	271.89 sq. m.	2,933 sq. ft.
Grate area	4.09 sq. m.	44 sq. ft.
Tractive effort at 85 per cent. boiler pressure	19,000 kg.	43,800 lb.
Adhesive weight	74.75 tonnes	73.55 tons
Factor of adhesion	3.76	3.76
Weight of engine in working order	85.674 tonnes	84.3 tons
Weight of engine in working order	59.105 tonnes	58.2 tons
Weight of engine and tender in working order	144.779 tonnes	142.5 tons
Water capacity of tender	25 cu. m.	5,500 gal.
Coal	10,200 kg.	10 tons

The provision of a boiler having a wide firebox on the framework for a 2-8-0 wheel arrangement has resulted in the centre line of the boiler having to be pitched no less than 10 ft. above rail level, a height possible only because of the relatively generous proportions of the Berne International Loading Gauge allowing of an overall height of 14 ft. above rail level. Of generous proportions, the boiler is provided with a round-top firebox; the inner firebox, of copper, is radially stayed to the outer firebox, after the manner of standard American practice. Flexible stays are provided for the first

three rows of roof stays and in the breaking zones of the water space stays. All roof stays are steel, with nuts on the fire side of the inner firebox plate, in accordance with Continental requirements. Water space stays, except for the flexible stays (which are steel) are copper, screwed into the inner and outer plates and riveted over. Boiler tubeplate and backplate stays are of the diagonal type, pinned to T-bars riveted to the tube and back plates and to the boiler barrel. Three arch tubes are expanded into the inner firebox throat and back plates; washout plugs in special seatings—designed to prevent damage to the threads of the seating when the tubes are being cleaned—are provided opposite each arch tube in the outer throat and back plates.

### Access to Boiler

An ample number of washout doors has been provided to give adequate access to the boiler and firebox; the door and seating are of a special type, much used on the Continent and consisting of an elliptical washout door with a flat face housed within a special housing of circular form welded into the boiler; the joint between door and seating is made with a copper asbestos joint ring. Housing and door are drop stampings, and as a flat seating is provided irrespective of the location of the door in the boiler, manufacture and maintenance of the doors is simplified.

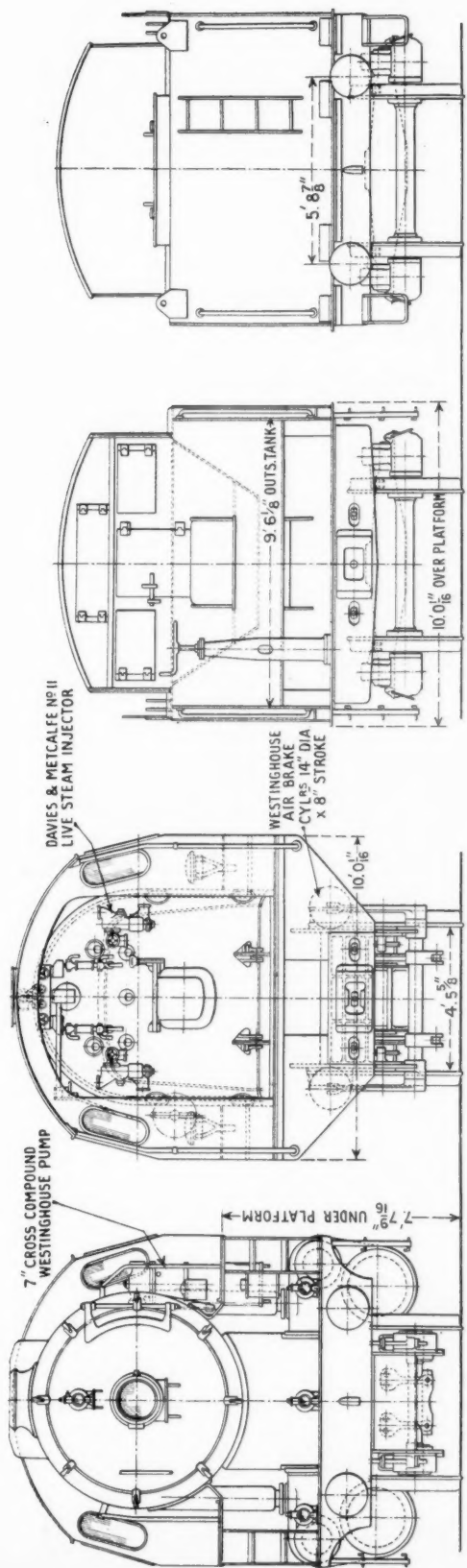
The boiler is fitted with 36 large tubes 133 mm. (5¼ in.) outside diameter, and 183 small tubes 51 mm. (2 in.) outside diameter, the former accommodating a 36-element superheater of the Superheater Company's manufacture, designed to give a steam temperature of 700° F. when the locomotive is at maximum capacity.

The superheater header accommodated in the smokebox is of the normal pattern provided with an anti-vacuum valve, and is supplied with steam by a balanced type regulator of Vulcan Foundry design and manufacture fitted in the dome.

The regulator is operated by means of a push-pull rod, connected to a regulator handle on the driving side of the cab, the assembly being equipped with a fine-tooth sector plate for easy control.

A balanced type stuffing box is fitted on the firebox back plate to eliminate the end thrust on the regulator rod; this practice results in the production of a regulator gear remarkably easy and positive in operation.

Included in the boiler mountings are two pop type safety valves 75 mm. (3 in.) dia., top-feed clackboxes, blow-down valves on the firebox throat plate and under the boiler barrel, two Reflex pattern water gauges, a forged steel manifold with steam valves for various fittings, and two Davies & Metcalfe 12 mm. lifting and re-starting hot-water injectors of

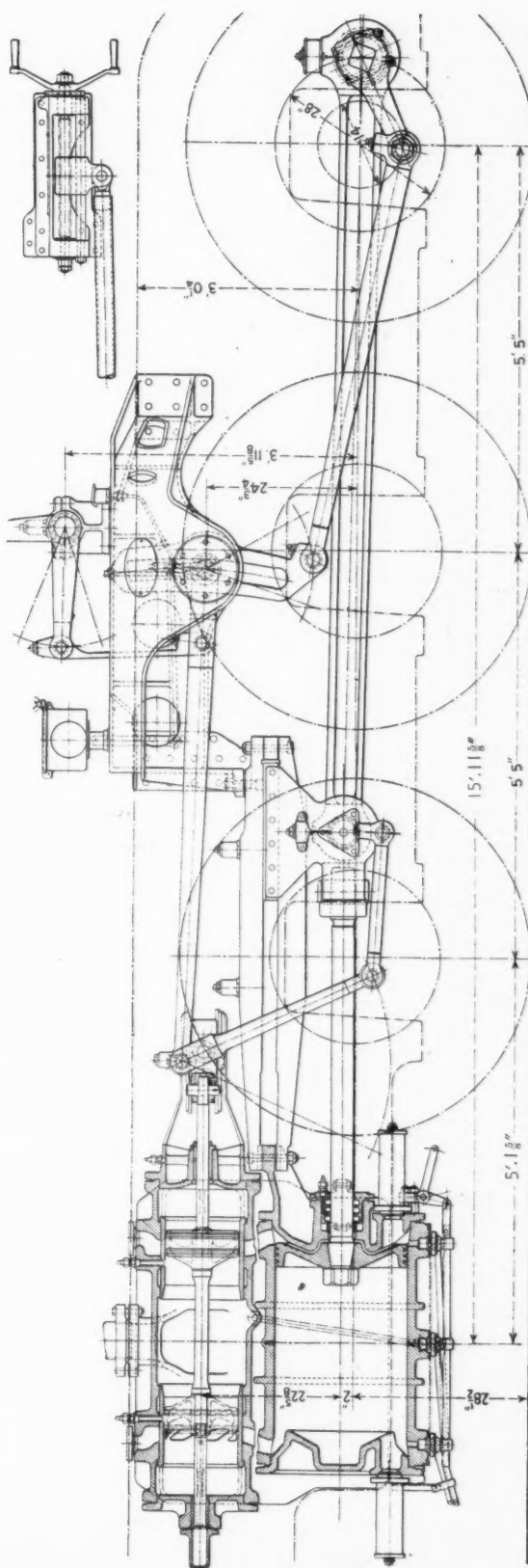


Front elevation of engine

Rear elevation of engine

Front elevation of tender

Rear elevation of tender



Arrangement of valve gear, with principal dimensions



special design, fitted to the firebox back plate in accordance with Continental requirements for locomotives operating in Eastern Europe under winter conditions.

The welded smokebox is circular, and is provided with large-diameter door secured by dogs, and with a conical spark arrester with wire mesh in accordance with Continental requirements.

The rocking firegrate is divided longitudinally into two units for easy operation by hand; the firebars are made up of loose "fingers" carried on cast-iron rocking bars. The double-hopper ashpans, with cast-iron doors, is operated from ground level by a hand lever. Air damper doors are provided at each side of the ashpans, below the foundation ring. The boiler is lagged with asbestos mattresses covered by steel clothing sheets supported on crinoline bars, and is supported in the frames by means of a saddle casting at the smokebox, sliding shoes at the front of the firebox, and a "breather" plate at the rear of the firebox.

#### Cylinders and Driving Gear

The bore of the cast-iron cylinders is 550 mm. (21½ in.) Narrow-ring piston valves 305 mm. (12 in.) in diameter have cast-iron heads mounted on a forged-steel valve spindle. The Continental engineers' insistence on rhomboidal steam ports in the valve liners made necessary this large diameter of valve, as this form of port reduces very considerably the steam port area obtainable by using rectangular ports. As a ratio of steam port area to cylinder area of about 1/7 was required, a piston valve 305 mm. in diameter was essential. In addition to the efforts made to provide adequate steam port area, every care has been taken in arranging to streamline the flow of steam into and from the cylinder, and in keeping the ports as direct as possible. The free running of the engine on test and the easy exhaust indicate that the design has achieved its object.

Front cylinder and steam-chest covers are of cast iron. The hind covers are of cast steel; moreover, the hind steam chest cover is combined with the valve spindle crosshead guide.

Large-diameter pressure relief valves of Continental pattern are fitted to the cylinders, and large-bore drain valves for cylinders and steam chests are also fitted, and are operated from the cab through suitable gearing.

Cylinder lubrication is by a 10-feed Wakefield mechanical lubricator mounted on the right-hand motion girder and feeding oil to the centre of each cylinder barrel, each piston valve head, each piston rod packing, and each valve spindle. Atomisers are fitted to the piston valve and cylinder barrel feeds.

A simple form of Walschaerts valve gear, so designed as to provide a straight-line drive from eccentric crank to piston valve spindle, gives a valve travel of 170 mm. (6½ in.), the maximum cut-off in full gear being 80 per cent.

The motion girder, in one piece, carries slidebars, reversing link, reversing shaft, and mechanical lubricators; the design results in appreciable saving in weight; it also reduces the machining and handling needed in manufacture and facilitates the accurate setting of details on it. The actual reversing is by a hand-operated screw on the side of the firebox.

The cast-steel pistons have cast-iron rings and the forged-steel piston rods are fitted with cast-iron packing. Crossheads are of the Laird pattern, of cast steel, with cast-iron slide-blocks lined with white-metal.

An unusual feature in the design is the connecting link attachment which is, by means of a tapered pin, pressed into the crosshead and secured by a cotter; this is the standard method adopted by a number of Continental railways.

Connecting and coupling rods are of fluted and rectangular section respectively, and are provided with circular fixed bushes lined with white-metal.

Oil lubrication is provided from circular oilboxes welded to the rods.

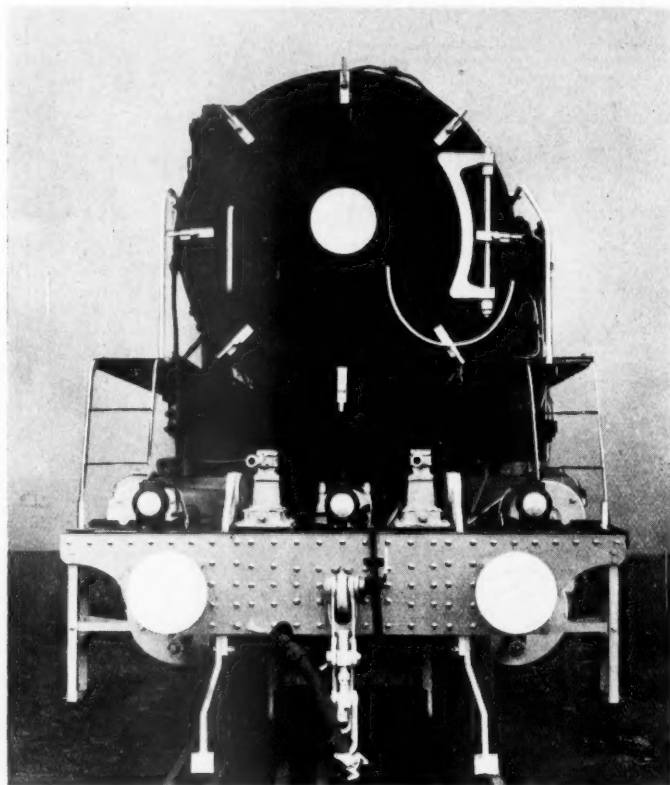
#### Wheels, Frames, and Spring Gear

Coupled wheels are of cast steel with balance weights cast integral, the driving wheel balance weights being hollow and filled with lead. All revolving weights are balanced and 30 per cent. of the reci-

ing facilities available here. For the same reason, the smokebox saddle has been made of cast iron and the frame stay immediately below it, which carries the truck compensating beam bracket, of cast steel.

Continental pattern drawgear is provided at the front of the engine together with Continental pattern side buffers. The frames are designed to accommodate the fittings of a central coupler should the Continental railways decide to change over to this form of drawgear at a later date. The intermediate drawbar is provided with a Spencer Moulton rubber drawspring.

Coupled springs are placed above the axleboxes to facilitate the dropping of wheels, when necessary; they are compensated in two groups. The leading pony truck, leading, and intermediate



Front view of engine

procating weights, the latter being evenly distributed in leading, intermediate and trailing wheels. The driving wheels are balanced for revolving weights only.

Tyres are of Continental cross-section secured by retaining rings which fulfil Continental requirements. Wheel hubs are fitted with gunmetal liners where they bear against the axlebox. Coupled axleboxes are of cast steel with white-metal lined bearings of crescent shape pressed into the cast steel shell.

Axleboxes are mechanically lubricated by a Wakefield lubricator mounted on the left-hand motion girder; the oil is fed in at the top of the axlebox and led to each side of the bearing as in L.M.S.R. practice. Cast-iron keeps, fitted with Armstrong oilpads, are also provided.

Engine frames are of steel plate, rigidly stayed by stays of cast steel and fabricated construction; this form of construction is adopted as best suited to the manufactur-

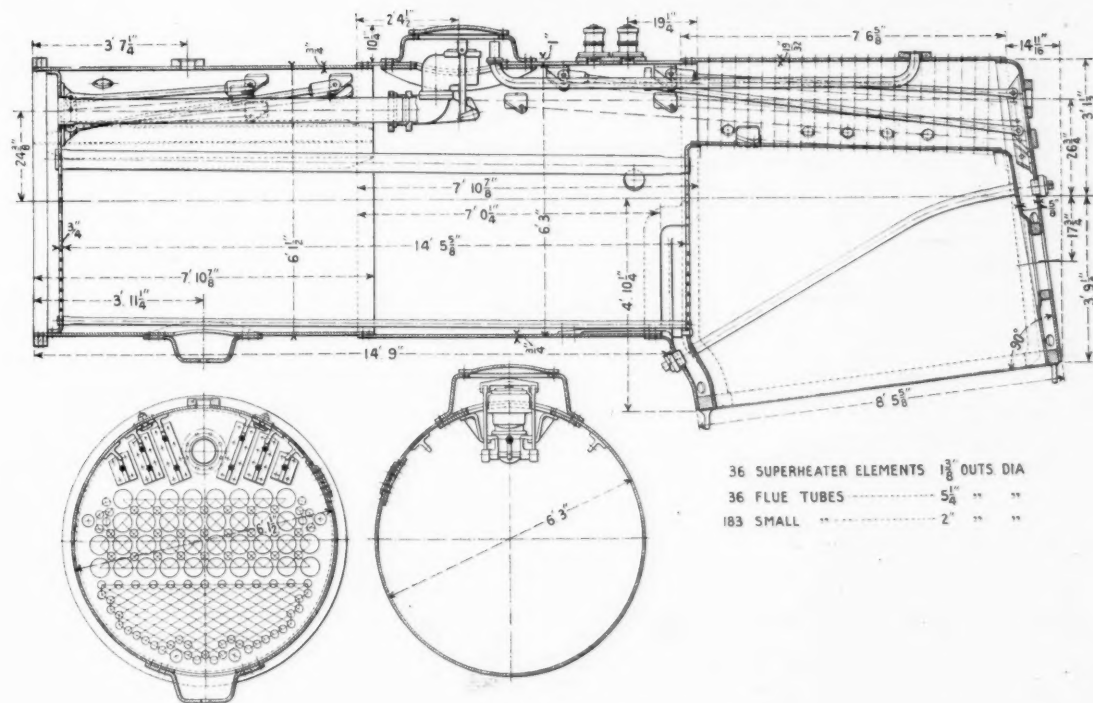
coupled wheels form one group, and the driving and trailing coupled wheels the second group.

Spring links are of rectangular section, without adjustment, and hard steel spring link washers and cotters are fitted.

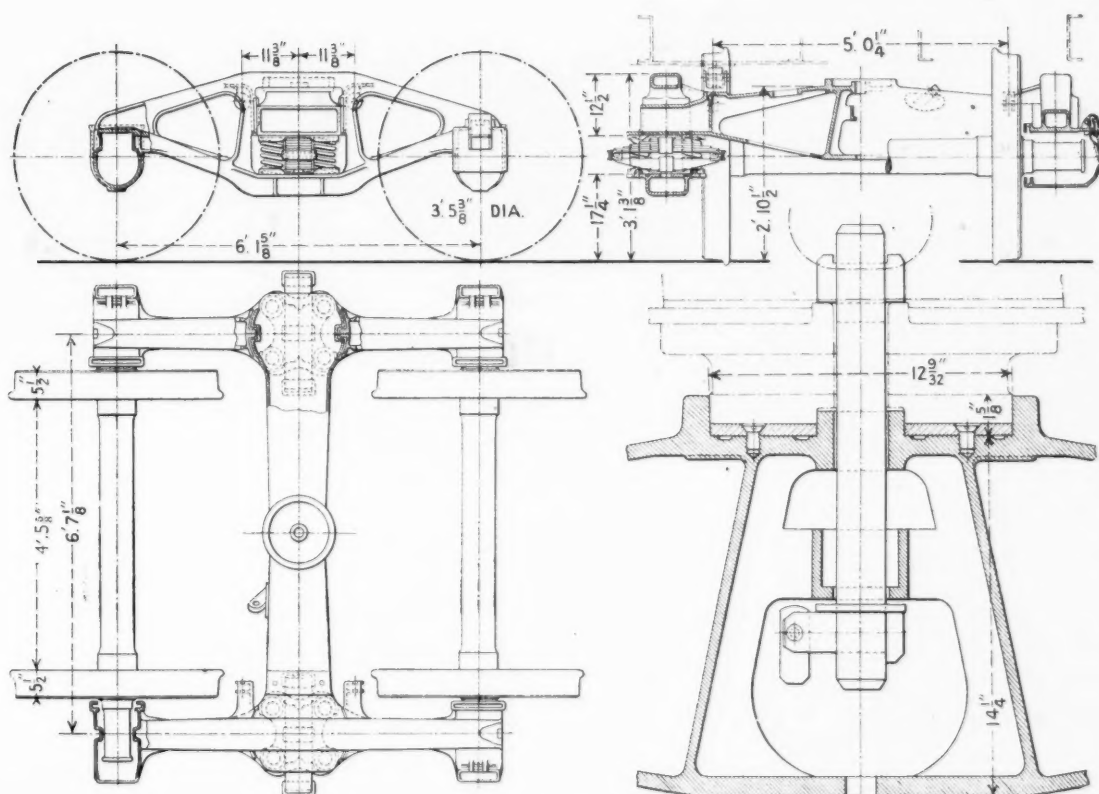
Axlebox guides are of cast steel, and are so designed as to allow for the fitting of adjusting wedges at a later date, should the fitting of these be decided upon by any railway. These wedges are in fact being fitted to the guides of engines built for the Grand Duchy of Luxembourg. Hornclips are fitted below the axlebox guides.

The engine front truck is of the conventional swing link type with plate frames and with bronze axleboxes lined with white-metal, lubrication of the axleboxes being effected through flexible connections from the mechanical lubrication feeding the coupled axleboxes.

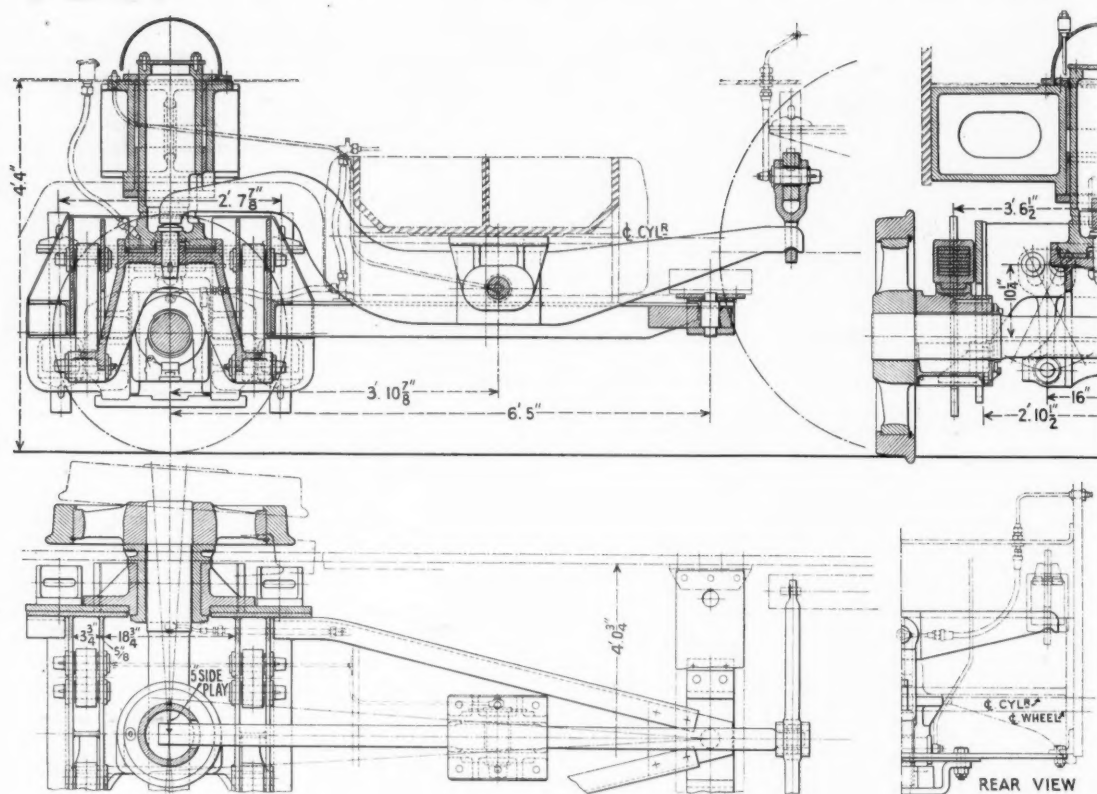
The truck spring gear is compensated



Longitudinal and cross-sections of boiler



Details of tender bogies



Details of leading pony truck

through a forged steel beam with the spring gear of the leading coupled axle.

Westinghouse automatic air brake equipment is fitted, with independent locomotive brake; the cross-compound air compressor (of high-capacity type) being capable of handling 100 cu. ft. of free air per min. In addition to the usual brake operating valve, an independent brake valve is fitted for use when it is desired to brake engine and tender only. Brake blocks on all coupled wheels are actuated through compensated brake rigging by two Westinghouse 14-in.  $\times$  8-in. brake cylinders operating a brake shaft mounted below the rear dragbox on the engine. Brake gear is designed for grease lubrication, Tecalet grease nipples being fitted to all pin joints and brake shaft bearings.

Sanding equipment, operated by compressed air, is applied to the front of the leading wheels and to the front and rear of the driving wheels. The large welded sandbox is located on top of the boiler, between the top feed clackbox and the steam dome—the casings for which join with the sandbox to form one unit.

A Stone's T.G.H. pattern turbo-generator, mounted on the right-hand side of the smokebox, provides current for very complete electric lighting equipment. In addition to the usual cab and bunker lights, a 14-in. headlight is provided, together with colour-changing marker lamps at the front of the engine and the rear of the tender. Plug-in points for inspection lamps are provided below the running boards in front of the motion girders and also on the smokebox front plate.

Gresham & Craven steam heating equipment is fitted for use when working passenger trains.

The cab, the sloping sides of which conform to the Continental loading gauge, is of welded construction, with a wood platform and upholstered seats for driver and fireman. The roof is wood-lined; and a steel back plate, partly enclosing the cab, is provided, draw curtains of canvas being fitted to the back plate opening for use in inclement weather. Large sliding windows are fitted on each side of the cab, with pivoted windows in the cab front plate and fixed windows in the back plate.

#### Tender

The tender, which has a tank and bunker of welded construction, is notable for the employment for the first time, on a tender built in this country, of American pattern cast-steel bogies of the plankless type, with axleboxes cast integral with the side frames. The use of these bogies has resulted in a considerable reduction in the weight of the tender, and it is worthy of note that apart from axlebox keyplates, bearings and lids, and two spring groups, the bogie consists of only two side frames and one cross-bolster, all of cast-steel construction.

Rolled steel channels and sections are used in the construction of the tender frame, the dragboxes and bogie centre castings being of cast steel. Both riveting and welding are employed in the building of the tenders. Brake blocks, of cast iron, carried in cast steel heads, are applied to all bogie wheels by a Westinghouse 14-in. by 8-in. brake cylinder mounted on the tender frame between the bogies. The brake rigging, fully compensated, is arranged for grease lubrication. A hand-brake is also fitted.

Standard pattern Continental drawgear is

fitted at the rear of the tender, which has been designed to accommodate a central coupler if one should be fitted later.

These locomotives, of which at present 120 are under construction for distribution to Poland, Czechoslovakia, Yugoslavia, and Luxembourg, should prove a very welcome addition to the rolling stock of these countries whose present equipment has been devastated by war; and there is no doubt that they will worthily uphold the deservedly high reputation of British-built locomotives for excellence of design and workmanship. Among the suppliers of special equipment are:—

Superheater: The Superheater Co. Ltd.  
Safety valves: R. L. Ross & Co. Ltd.  
Blow-down valves: Everlasting Valve Co. (Gt. Britain) Ltd.  
Water gauges: W. L. Baines & Co. Ltd.  
Injectors: Davies & Metcalfe Limited.  
Pressure gauges: W. H. Bramhall & Co. Ltd.

Piston rod packing: United States Metallic Packing Co. Ltd.

Buffers: Geo. Turton Platts & Co. Ltd.  
Intermediate drawbar spring: Geo. Spencer Moulton & Co. Ltd.

Mechanical lubricators: C. C. Wakefield Limited.

Air brake equipment: Westinghouse Brake & Signal Co. Ltd.

Asbestos mattresses: J. W. Roberts Limited.  
Air sanding equipment: Davies & Metcalfe Limited.

Steam heating equipment: Gresham & Craven Limited.

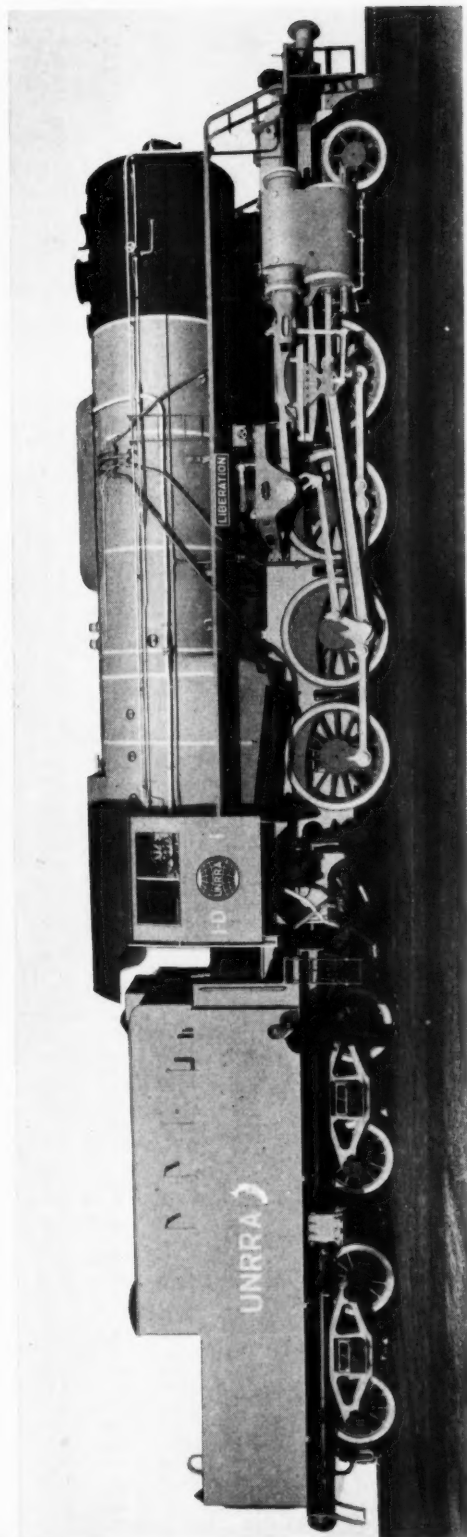
Grease lubricating: Tecalet Limited.  
Tender bogie frames and spring assemblies: Davis & Lloyd Limited.

Electric lighting: J. Stone & Co. Ltd.

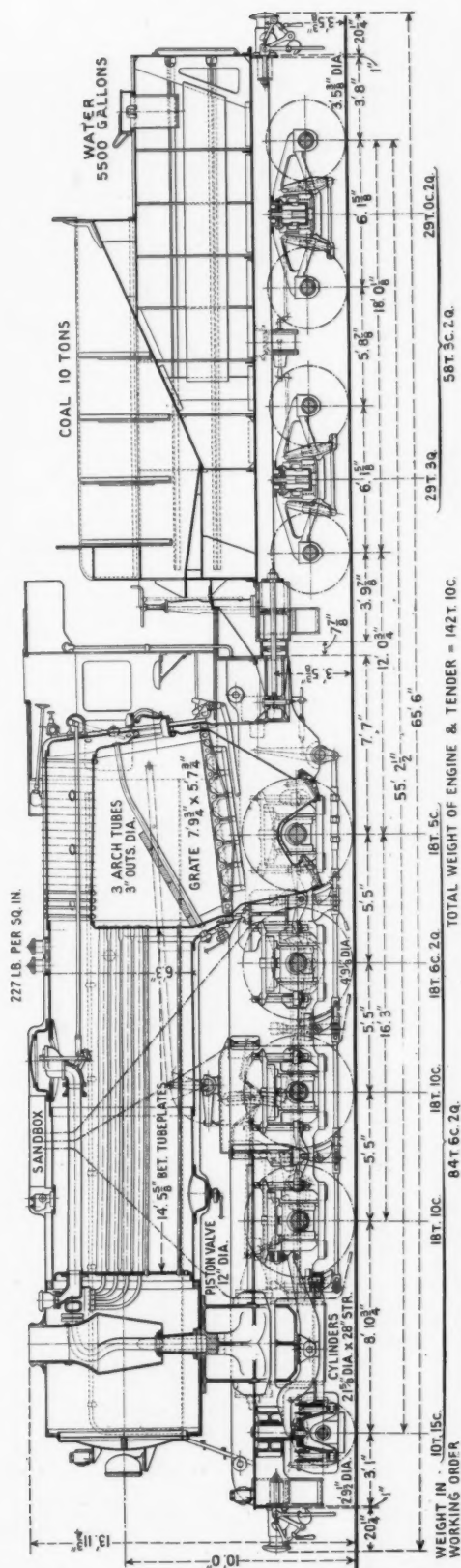
Messrs. Rendel, Palmer & Tritton, 55, Broadway, London, S.W.1, are acting as Inspecting Engineers for U.N.R.R.A. on this contract.



# The "Liberation" Locomotive



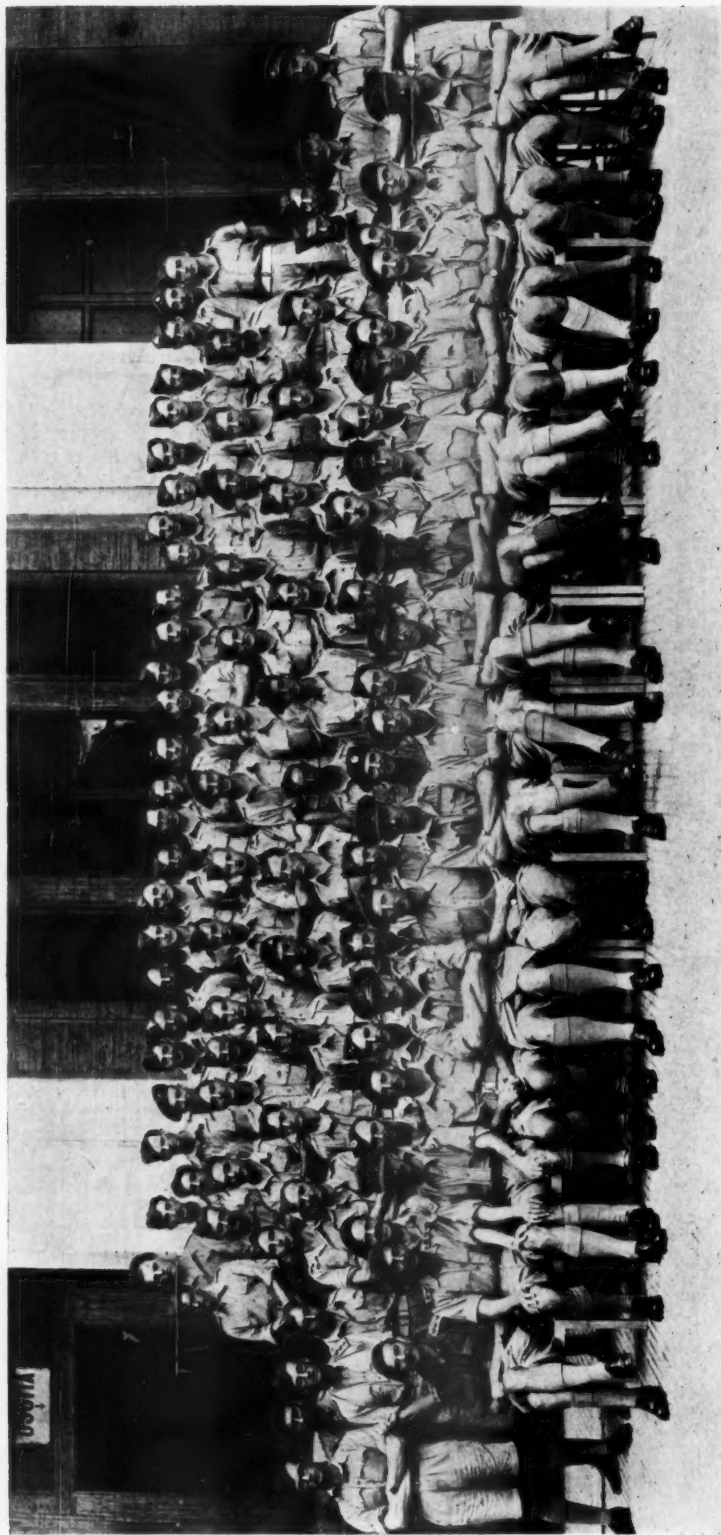
Side view of "Liberation" locomotive, built by the Vulcan Foundry Limited



Principal dimensions and axle loadings of the "Liberation" locomotive and tender

## British Members of Military Railway H.Q. Staff in Italy, 1944

(See letter on page 702)



*A group photograph, taken at the Ministry of Communications building in Rome in 1944, of the British members of the Military Railway H.Q. staff in Italy as then constituted*

Front row (left to right): Captain Speight, Captain Maritz (S.A.E.C.), Major Williams, Major Reynolds, Lt.-Colonel Coward, Colonel Parkes, Brigadier Waghorn (Director, Military Railway Service, Italy), Colonel Ratter, Lt.-Colonel Pannell, Lt.-Colonel Butcher, Lt.-Colonel Chaplin, Major Wilson, Captain Swinson, Captain Inglis

## RAILWAY NEWS SECTION

## PERSONAL

Mr. P. R. Angus, Chief Mechanical Engineer, and Mr. F. W. Aickin, Legal Adviser, of the New Zealand Government Railways, are at present in London in connection with the placing of contracts relating to electrification on the New Zealand Railways.

Mr. R. J. Howley has resigned the Chairmanship of the British Electric Traction Co. Ltd., and Mr. H. C. Drayton succeeds him as Chairman. Mr. Howley retains his seat on the board.

We regret to record the death on June 22 of Mr. Henry Grattan Oliver, who earlier this year retired, on account of ill health, from the position of Secretary of United Railways of the Havana & Regla Warehouses Limited.

Lt-Colonel W. Wallace, late Royal Engineers, whose appointment as Railway Adviser in the British Economic Mission to Greece was recorded in our April 12 issue, has been promoted to be Head of the Transportation Section of the Mission. This appointment involves the co-ordination of the activities of the railway, motor transport, and roads and docks construction sub-sections; coastal shipping also comes within the sphere of the Transportation Section.

Mr. John Rosswick is relinquishing his appointment as Director of Public Relations in the Ministry of Transport on his return to Odhams Press Limited, by which his services have been lent to the Ministry since 1941. The Minister of Transport has appointed Mr. F. G. Humphrey, O.B.E., to succeed Mr. Rosswick. Mr. Humphrey is at present Director of the Campaigns Division of the Central Office of Information. He will be succeeded in that post by Lt-Colonel G. F. Tolhurst.

**INDIAN RAILWAY STAFF CHANGES**  
Mr. O. R. Tucker, Officiating Chief Operating Superintendent, E.I.R., has been appointed to officiate as Railway Liaison Officer, Calcutta Area.

Mr. P. P. Kulkarni has been appointed to officiate as Chief Electrical Engineer, E.I.R.

Mr. H. M. Jagtiani has been appointed to officiate as Chief Commercial Manager, N.W.R.

Mr. S. A. Carter, A.M.Inst.T., has been appointed Commercial Manager to Olley Air Service Limited, Croydon Airport, the railway-associated air charter company, which has recently resumed its air charter business after wartime service as a member company of the Associated Airways Joint Committee. On his new appointment he vacates the position, which he has occupied for the past three years, of Personal Assistant to the Deputy General Manager, Southern Railway. For the past seven months he has been Secretary of the Railway Air Committee.

Mr. A. H. Peppercorn, O.B.E., M.I.Mech.E., Assistant Chief Mechanical Engineer, London & North Eastern Railway, who, as recorded in our June 21 issue, has been appointed Chief Mechanical Engineer, was educated privately and at Hereford Cathedral School. He entered the service of the Great Northern Railway in 1905, serving as a premium apprentice at Doncaster Locomotive Works first under Mr. H. A. Ivatt, Locomotive Super-

ford, and in 1937 he became Locomotive Running Superintendent of the L.N.E.R. Southern Area. A year later he was promoted to the post of Mechanical Engineer, North Eastern Area, at Darlington. Mr. Peppercorn returned to Doncaster for the second time in 1941, when he was appointed to the dual post of Assistant Chief Mechanical Engineer of the L.N.E.R. and Mechanical Engineer, Doncaster. Four years later he relinquished the latter post

to give closer assistance to Mr. Edward Thompson, the Chief Mechanical Engineer, whom he now succeeds, and to take charge of the department in his temporary absence. Mr. Peppercorn was made an O.B.E. in the King's Birthday Honours, 1945. He visited the United States towards the end of 1945 to study railway practice and production methods in that country.

M. Jules Moch is Minister of Public Works & Transport in the new French Cabinet.

Among recent awards in recognition of gallant and distinguished services in Burma is that of the C.B.E. (Military Division) to Brigadier (acting) Charles Edward Mercer Herbert, O.B.E. (27922), Corps of Royal Engineers.

Mr. George Stuart Wood and Mr. Rawson F. Stagg have been appointed Local Directors of Thos. W. Ward Limited. Each is a son of a Joint Managing Director, the former of Mr. George Wood, who is also Deputy-Chairman of the company, and the latter of Mr. Frank R. Stagg.

## PRESENTATION TO MR. J. H. BREBNER

Tribute was paid by representatives of British and foreign newspapers to Mr. J. H. Brebner, formerly Director, News Division, Ministry of Information, when, at the Press Club on June 20, they presented him with a portrait of himself in oils by Mr. Henry Carr. Lord Rothermere made the presentation. Mr. Brebner is now Chief Public Relations & Publicity Officer, London Passenger Transport Board.

## FUNERAL OF MAJOR-GENERAL C. S. NAPIER

The funeral service for Major-General C. S. Napier, Chief of Movements & Transportation, Supreme Headquarters, Allied Expeditionary Force, from 1944 to 1945, and later Deputy-Director of Movements, War Office, was held on June 20 at St. Luke's, Sydney Street, Chelsea. Those present, in addition to family mourners, included:—

Brigadier K. N. Simner; Brigadier A. T. de Rhé-Philipe; Colonel C. de Linde; Mr. V. M. Barrington-Ward, Divisional General Manager (Southern Area), L.N.E.R.; Mr. S. E. Newman, Assistant (Movements), Chief Operating Manager's Department, L.M.S.R. (representing Sir William Wood, President, and Mr. S. H. Fisher, Chief Operating Manager, L.M.S.R.); Messrs. W. G. Pape, War-time Economy & Salvage Liaison Officer, and P. E. Weeks, Chief of Special Traffic, Southern Railway.



Mr. A. H. Peppercorn

Appointed Chief Mechanical Engineer, L.N.E.R.



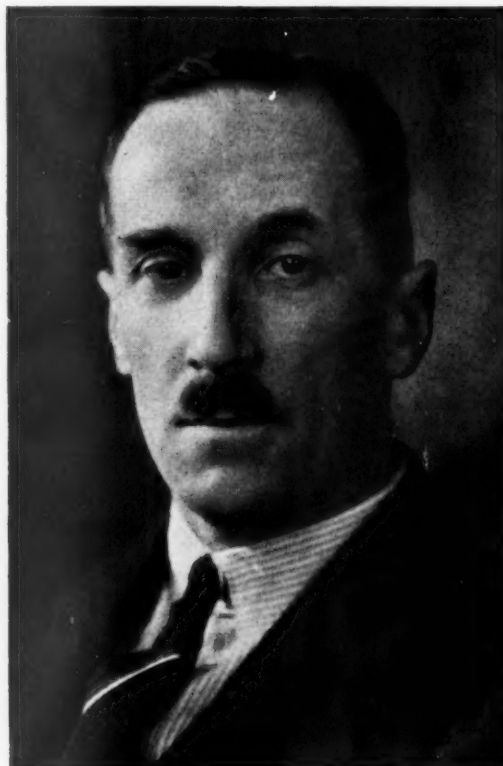
Mr. Frederick Seymour Whalley, M.C., M.I.Mech.E., M.I.Loco.E., Vice-Chairman & Managing Director of the Vulcan Foundry Limited, and President of the Locomotive Manufacturers' Association, is President of the Institution of Locomotive Engineers for 1946-47. He was born on May 1, 1885, and was educated at the King's School, Canterbury, and the City & Guilds Central Technical College, London. After practical training in the locomotive works of the Vulcan Foundry Limited, and subsequently in the Running Department of the London & South West-

Engineering Employers' Association in 1931, and was re-elected for 1932 and 1933. He was elected President of the Locomotive Manufacturers' Association in 1936, and still holds that office. In 1940 Mr. Whalley was appointed Chairman of the Locomotive Manufacturers' Export Group, and, in 1942, Chairman of the newly-formed Railway Engineering Supply Industries Joint Committee. From 1941 to 1945 he was a Director of the North British Locomotive Co. Ltd., and in 1944 he was elected Chairman of Robert Stephenson & Hawthorns Limited. The

Mr. H. H. Saunders, O.B.E., M.I.Mech.E., M.I.Loco.E., General Manager, Vulcan Foundry Limited, who, as recorded in our June 21 issue, has been elected a Director, and appointed Joint Managing Director, was born on June 23, 1888, in Monmouthshire, and was educated at Tonbridge School, Kent. He served a five years' apprenticeship in the Wolverhampton Workshops of the Great Western Railway, and in 1913 was appointed Assistant Locomotive Superintendent on the Indian State Railways and joined the North Western Railway. In



Mr. F. S. Whalley  
Vice-Chairman & Managing Director,  
Vulcan Foundry Limited



Mr. H. H. Saunders  
Joint Managing Director,  
Vulcan Foundry Limited

tern Railway, Eastleigh, he was appointed in 1910 an Assistant Locomotive Superintendent, Indian State Railways, and was posted to the North Western Railway. In 1914 he was acting as Secretary, Locomotive & Carriage Superintendents' Committee, Indian Railway Conference Association, but at the outbreak of war he accompanied Indian Expeditionary Force "B" overseas with a commission in the Royal Engineers, serving with the Railway Corps in East Africa. He was mentioned twice in despatches, awarded the Military Cross, and promoted Major; and ultimately held the position of Chief Mechanical Engineer, East African Military Railways. On reversion from military duty he returned to India in 1921 as District Locomotive Superintendent, N.W.R. In 1923 Mr. Whalley relinquished his appointment in India to become General Manager, Vulcan Foundry Limited, at Newton-le-Willows, of which he was appointed Managing Director in 1929, and Vice-Chairman in 1941. He was elected President of the Manchester & District

Fellowship of the City & Guilds of London Institute was conferred on him in 1944. At the recent annual general meeting of the Vulcan Foundry, Mr. Walter Woodbine Parish, the Chairman, intimated his intention, during the year, of passing the Chairmanship over to Mr. Whalley.

The late Mr. Frank Parkinson, who was Chairman of Crompton Parkinson Limited, left £1,487,285.

We regret to record the death, in America, on June 15, of Mr. T. W. Fairhurst, M.I.Mech.E., a Director of Ruston & Hornsby Limited, and Davey, Paxman & Co. Ltd. He was a Member of the Engineering Institute of Canada and American Society of Mechanical Engineers.

M. Pierre de Malglaive, Chairman of the Compagnie Générale Transatlantique, has had conferred on him by the French Government the medal and the rank of *Officier de la Résistance*, for the part which he played here in the organising of the French Resistance Movement.

August, 1915, he proceeded to East Africa with the Indian Expeditionary Force; and in 1917 he was granted a commission in the Royal Engineers as Captain and was transferred to German East Africa. He was made an M.B.E. (Military) in the King's Birthday Honours, 1917. In 1920 Mr. Saunders returned to civil duties with the N.W.R., India, on which he became Assistant to the Agent. He was appointed Superintendent, Mechanical Workshops, in 1927, having charge of all locomotive, carriage and wagon workshops on that railway. He was invalided home in 1929, and on return was transferred to the East Indian Railway, where he held charge first of the Lucknow Workshops and later the Jamalpur Workshops as Deputy Chief Mechanical Engineer. Mr. Saunders was made an O.B.E. (Civil) in 1934 for services in connection with the Bihar earthquake of that year. In December, 1935, he joined the Vulcan Foundry Limited as Assistant to the Managing Director. In December, 1941, Mr. Saunders was appointed General Manager of the Vulcan Foundry Limited.

**The King's Birthday Honours List**

The following is a selection of the honours in the King's Birthday List announced on June 24 (a selection of those announced on June 13 was published in our last week's issue):—

**O.B.E. (Civil Division)**

Mr. Edgar Alcock, M.B.E., Vice-Chairman, North Eastern Regional Committee, Engineering Employers' Association, Chairman & Joint Managing Director, Hunslet Engine Co. Ltd.

Mr. Claude Ernest Ayres, lately Deputy Regional Transport Commissioner (Wales Region), Ministry of Transport.

Mr. Henry Baume, M.I.A.E., Works Manager, D. Napier & Son Ltd., Acton.

Mr. Aloysius Bracken, Chief Engineer, Scottish Motor Traction Co. Ltd.

Mr. Arthur William Browne, M.I.E.E., Technical Director, Chloride Electrical Storage Co. Ltd., Manchester.

Mr. Kenneth John Cook, M.I.Mech.E., Manager, Locomotive Works, Swindon, Great Western Railway.

Lt.-Colonel Ernest Graham, Mechanical Engineer (Railways), London Passenger Transport Board.

Mr. Cyril Alexander Frederick Hastilow, late Director of Paint Materials, Ministry of Supply, Chairman, Docker Brothers.

Mr. Percy Reginald Hickman, lately Chief Superintendent of Stores, Ministry of Transport. Now Assistant Chief Stores Superintendent, L.M.S.R.

Mr. Gerald Leedam, Secretary & Manager, Cheshire Lines Committee.

Mr. Arthur Claud Lisle, M.Inst.T., Chairman, South West Regional Canal Committee. General Manager, Sharpness Docks & Gloucester & Birmingham Navigation Company.

Mr. Eric Walkden Rostern, M.C., Superintendent, Southern Area, L.N.E.R.

Lt.-Colonel Harold Rudgard, Superintendent of Motive Power, L.M.S.R.

Mr. Gilbert Owen Waters, A.R.Ae.S., Managing Director, Channel Islands Airways Limited.

**M.B.E. (Civil Division)**

Mr. John Edward Blackshaw, Director & General Manager, G. D. Peters & Co. Ltd., Slough, Bucks.

Mr. Hugh Campbell, Engineer Superintendent, Associated Airways Joint Committee, and Chief Engineer, Isle of Man Air Services Limited.

Major Francis John Chapple, D.S.O., Member, Bristol Wing Committee, South West Command, Air Training Corps, Director & General Manager, Bristol Tramways & Carriages Co. Ltd.

Mr. Arthur Selwyn Davies, Chief Buyer, Guest Keen Baldwins Iron & Steel Co. Ltd., Port Talbot.

Miss Nellie Olive Forty, Special Clerk, L.P.T.B.

Mr. Bertie Matthews Furneaux, Chief Draughtsman, Experimental Bridging Establishment, Ministry of Supply.

Mr. James William Green, Machine Shops Manager, Sheepbridge Coal & Iron Co. Ltd., Chesterfield.

Mr. William Ewart Green, District Superintendent, Kings Cross, L.N.E.R.

Mr. Thomas Edgar Heydon, Chief of the Divisional Trains Office, Derby, L.M.S.R.

Mr. Arthur Lord, Superintendent, Salford Electrical Instruments Limited.

Mr. William Boyd Mann, Chief Engineer, Southern Section, Scottish Airways Limited.

Mr. Thomas William Marsh, Traffic Superintendent, Maidstone & District Motor Services Limited.

Mr. Arthur William Marshall, F.I.A., Assistant Actuary, Ministry of Transport.

Mr. Charles William Marsland, Electrical Assistant, Paddington, Great Western Railway.

Mr. Joseph Matthews, Superintendent, Heat Treatment Department, Hadfields Limited, Sheffield.

Mr. Frederick Charles O'Connor, Stationmaster, Manchester (Exchange & Victoria), L.M.S.R.

Mr. Reginald Frederick Cecil Roach, Registrar, Railway & Canal Commission, Supreme Court of Judicature.

Mr. William Shorrocks, Assistant Works Manager, English Electric Co. Ltd., Preston.

Captain George William Thompson, Master, ss. *Don*, L.M.S.R.

Mr. Cyril Wesley Trickett, Works Manager, I.C.I. Metals Limited, Swansea.

Mr. Horace Curtis Wills, Senior Executive Officer, Ministry of Transport.

Mr. Walter Wilson, Divisional Police Superintendent, Newcastle, L.N.E.R.

Mr. Thomas Woods, Works Manager, Leyland Motors Limited.

We regret to record the death on June 19, at the age of 72, of Mr. A. R. Powell, Chief Accountant, Associated Equipment Co. Ltd., from 1926 to 1938.

## North British Railway Centenary Celebrations at Edinburgh

*Sir Ronald Matthews on the Future of Transport*

To mark the centenary of the opening on June 18, 1846, of the Edinburgh & Berwick Line, North British Railway, an exhibition of locomotives and rolling stock was held at Waverley Station, Edinburgh, on June 19 and 20. The exhibition demonstrated the advance made in railway development by the display of the most modern locomotives and rolling stock, with, as a contrast, a locomotive built in 1870 and the North British Railway horse-drawn "Dandy" coach first used in 1861.

The list of exhibits included a first class corridor coach of post-war design; a third class corridor brake coach; road-rail tanks used by the L.N.E.R. to carry edible oils and equipped with thermostatically-controlled electric-heating apparatus; a diesel-electric shunting locomotive in use in large marshalling yards; a mobile signalling school fitted with representative types of electrical and mechanical signalling devices; a 45-ton breakdown crane and a breakdown travelling van; an anthracite electric composite restaurant car and a first class sleeping car. The locomotives on view were the 4-6-2 express passenger locomotive No. 2001, *Cock o' the North*; 4-2-2 Stirling locomotive No. 1, built in Doncaster Works in 1870 and now in the Railway Museum at York; a 4-6-0 mixed-traffic steam locomotive No. 1048 of the "Antelope" class, and the latest locomotive built for the L.N.E.R.; and the streamlined 4-6-2 express passenger locomotive No. 14, the *Silver Link*; the 4-6-2 express passenger locomotive No. 4470, *Great Northern*; and the 2-6-4 mixed-traffic locomotive No. 9000.

Sir Ronald W. Matthews, Chairman of the London & North Eastern Railway Company, presided at a centenary luncheon held at the North British Station Hotel, Edinburgh, on June 20, when among those present were:—

**Principal guests:** The Lord Provost of Edinburgh, the Mayor of Berwick-upon-Tweed, the Earl of Home, Sir J. C. Fenton, the Rt. Rev. Charles L. Warr, Sir Thomas Innes of Learney (Lord Lyon King of Arms), Major General Collier, Commodore J. W. Farquhar, Mr. H. G. Younger, Mr. J. A. Kay (Editor, *The Railway Gazette*), Mr. D. R. Lamb (Editor, *Modern Transport*), Mr. J. Murray Watson (Editor, *The Scotsman*), Sir William J. Thomson, Sir Frank Soskice (Solicitor-General), the Rt. Hon. J. S. C. Reid, M.P. (Dean of the Faculty of Advocates), the Earl of Elgin, Lord Younger, Sir Norman Duke, Mr. J. M. Erskine, Sir Harry Hope, Mr. Andrew Gilzean, M.P., Sir Henry Steele, Sir Robert M. Grant, Sir Robert Bruce (Scottish Committee, L.M.S.R.), Sir J. Donald Pollock, Sir Gilbert Archer, Colonel E. Birnie Reid (Scottish Committee, L.M.S.R.), Mr. T. H. Moffat (Assistant to

Chief Officer for Scotland, L.M.S.R.), Mr. J. H. Philipps (Operating Manager, Scotland, L.M.S.R.), Mr. J. Brewster (District Goods & Passenger Manager, Edinburgh, L.M.S.R.), Mr. W. Gourley (District Engineer, Edinburgh, L.M.S.R.).

**L.N.E.R.:** Lt.-Colonel the Hon. A. C. Murray (Chairman, Local Board for Scottish Area), Mr. W. K. Whigham (Deputy Chairman), Sir Samuel Strang Steel, Sir Harold Mitchell, Sir A. Erskine-Hill (Directors), Mr. W. H. Johnson (Secretary), Mr. T. F. Cameron (Divisional General Manager, Scottish Area), Mr. George Mills (formerly Divisional General Manager, Southern Area), Mr. C. S. McLeod (Assistant Divisional General Manager, Scottish Area), Mr. H. G. Sayers (Superintendent, Scottish Area), Mr. C. J. Y. Dallmeyer (Solicitor, Scotland), Mr. W. Y. Sandeman, Engineer, and Mr. M. G. Maycock, Assistant Engineer, Edinburgh, Mr. J. Scott (District Engineer, Edinburgh), Mr. J. F. Harrison (Mechanical Engineer, Scotland), Mr. F. C. Margetts (Assistant Superintendent, Scottish Area), Mr. G. M. Johnson (District Superintendent, Edinburgh), Mr. E. W. I. Arkle (Goods Manager, Scottish Area), Mr. W. L. Kelly (Assistant Goods Manager, Scottish Area), Mr. L. E. Marr (Passenger Manager, Scottish Area), Mr. J. W. Barr (Assistant Passenger Manager, Scottish Area), Mr. H. B. Angus (District Goods & Passenger Manager, Edinburgh), Mr. E. D. Trask (Locomotive Running Superintendent, Scottish Area), Mr. R. Thompson (Assistant Locomotive Running Superintendent, Scottish Area), Mr. B. P. Blackburn (District Locomotive Superintendent, Edinburgh), Mr. R. M. Scott (Factor, Scottish Area), Mr. H. S. Cole (Chief of Police, North Eastern & Scottish Areas), Mr. C. G. Jarrett (Hotels Superintendent, Scottish Area), Captain H. J. Perry (Marine Superintendent, Scottish Area), Mr. J. B. Dunlop (Press Relations Officer, Scottish Area Representative), Mr. W. Charlton (Assistant Chief of Police, Edinburgh), Mr. M. R. Bonavia (Assistant to Chief General Manager, Public Liaison), Mr. A. J. White (Advertising Manager), Mr. G. Dow (Press Relations Officer).

Lt.-Colonel the Hon. Arthur C. Murray, C.M.G., D.S.O., Chairman, Scottish Area Board, L.N.E.R., proposed the toast of "The City and Royal Burgh of Edinburgh and the Loyal and Ancient Borough of Berwick-upon-Tweed."

The Right Hon. Sir John I. Falconer, the Lord Provost of Edinburgh, replying to the toast, said that Edinburgh owed much to the railway. In the middle of the last century the Scottish capital had an area of 3,400 acres and a population of 133,692 persons. Today the city enclosed 32,500 acres and the population approached half a million. The city had some 36 railway passenger stations and 31 goods stations. By joint planning between the railway companies and the city, much could be accomplished to help the

work of the railways and to improve the conditions of the city. Talks had already taken place on this matter, and he knew the railways would do all in their power to help.

Councillor F. Stott, J.P., the Mayor of Berwick-upon-Tweed, also responded to the toast.

Lord Elphinstone, in the absence through indisposition of Sir John Fraser, K.C.V.O., Principal & Vice-Chancellor, University of Edinburgh, proposed the toast "The London & North Eastern Railway."

Sir Ronald Matthews, in reply, said that as a humble Englishman, he was delighted and impressed to see so many prominent figures in Scottish affairs. He confessed he welcomed any excuse to visit the beautiful City of Edinburgh, and to lend a little moral support to that band of intrepid railwaymen from over the Border, who had succeeded in establishing themselves in these stern and wild surroundings.

Edinburgh was one of the three great pillars which supported the structure of the railway. It was said that after the Act of Union in 1707, and the contamination which Scotland thereby suffered through association with what its inhabitants were accustomed to describe as "South Britain," the decline of Edinburgh was symbolised by the fact that the grass grew in the High Street, and the silence of decay hung about the city. Today, the green valley between the Old Town and the New echoed to the sounds of trains moving continually between Scotland and England, effectively linking the two countries in a manner never dreamed of when the Act of Union was concluded.

They commemorated an invasion of England by the Scots, when they constructed and opened the North British Railway southwards from Edinburgh as far as the ancient frontier town of Berwick-upon-Tweed. On this occasion—unlike some others—the Scots were warmly welcomed at the Border. Across the river an English railway had already been constructed from Newcastle, and only the completion of the Royal Border Bridge across the Tweed was needed to consummate the Act of Union in a most practical manner.

In the booklet written to commemorate this occasion, it was suggested that Dr. Johnson, who once observed that the finest prospect a Scotsman ever saw was the high road leading to England, would have been sardonically amused had he lived to see the perseverance with which the Scots drove the railway to the English border. He might have been, though not perhaps for the reason in the mind of the compiler of the booklet; for the majority of the original shareholders in the North British Railway were English—in fact, they outnumbered the Scots by three to one—just one more tribute to the perspicacity of the Scot!

Both countries had played their part in the forging of the railway link between them. The forbears of the L.N.E.R. were not, in 1846, yet able to provide a continuous route from London to Edinburgh: the first linking of the two cities by rail was achieved by a circuitous route in which the ancestors of the present London Midland & Scottish and London & North Eastern Railways both had a share. From the terminus at Euston Square one had to travel to Rugby by the London & North Western Railway; thence to Derby and Normanton by the Midland Railway; on by the York & North Midland and the York, Newcastle & Berwick to the banks of the Tweed, and then by the North

British to Edinburgh. The crossings of the Tyne from Gateshead to Newcastle, and of the Tweed from Tweedmouth to Berwick, both involved ferry passages, and the whole of the journey took 13 hours 20 minutes.

He was sure that the L.M.S.R. would not mind if he said that it was a good thing when this uneasy partnership was dissolved, and the East Coast route from Kings Cross to Edinburgh came into being. Meanwhile, it had opened its own west coast route in alliance with the great rival of the North British, the Caledonian Company. The east and west coast groups of associated companies were rivals for many years and operated the principal trains with jointly-owned carriages bearing the initials E.C.J.S. or W.C.J.S. for East or West Coast Joint Stock.

The rivalry had become most acute in 1888, when the "Race to Edinburgh" took place in the early days of August. The authorities at Euston and Kings Cross started to accelerate their best trains from the times of 9 or 10 hours, which were then in force, and the record (for those days) was achieved by the East Coast line with a journey time of 7 hours 27 minutes from Kings Cross to Edinburgh. This race was a forerunner of the more famous race to Aberdeen which took place in 1895.

After the period of the racing trains, the journey time settled down at 8½ hours, at which it remained for a good many years, during which improvements in amenities were effected in preference to increases in speed. The East Coast route inaugurated the non-stop runs from Kings Cross to Edinburgh; it also saw the first articulated coaches in this country, the first Pacific locomotives in regular service, the first all-electric kitchen car, the first railway hairdressing saloon and cinema coach, and the first all-Pullman train from London to Edinburgh.

The L.N.E.R. always had been particularly anxious to maintain the reputation of its East Coast services. It had a special officer, called the East Coast Inspector, whose function, and that of his assistants, was to travel up and down the line observing the running of the principal expresses and making suggestions for detailed improvements of all kinds. It was, of course, after him that the "Flying Scotsman" was named!

Finally, in 1937, the L.N.E.R. had inaugurated the "Coronation"—that supreme example of the skill of the locomotive engineer and of the railway carriage builder—which covered the 393 miles between London and Edinburgh in exactly 6 hours. He wished he could give the date on which the "Coronation" would resume its triumphal progress. Unfortunately, there were two reasons why he could not. The first was the condition of the track. It was inevitable that under war-time conditions maintenance should suffer, and although the railway was hard at work overtaking arrears, it would be still some time before it was safe to run at full pre-war speeds.

The second was the pressure on accommodation. The "Coronation" only seated 216 passengers while the other principal trains on the East Coast route could provide seats for between 500 and 700.

The company was anxious to see the "Coronation" back in service and certain trials had already been made with encouraging results. It would be a sorry day for all concerned were the spirit of friendly rivalry between one great company and another to disappear, though he was happy to say that they had learnt to co-

operate with their friends on the L.M.S.R. in a way that would not, perhaps, have seemed appropriate to those who guided the destinies of the old North British in its years of rivalry with the Caledonian.

During the discussions that took place before the passing of the Railways Act, 1921, serious consideration had been given to forming a separate Scottish group. In the event, however, the railways of Scotland were associated with their former allies of the east coast and west coast routes respectively. He did not think that they on the L.N.E.R. had failed to preserve the individuality of their Scottish lines. To no small extent the old North British Railway lived on in the Scottish Area organisation of the L.N.E.R., with its Area Board and Divisional General Manager. The North British, it would never be forgotten, gave the L.N.E.R. its first Chairman, Mr. William Whitelaw, who would always be remembered with deep affection and respect by all who had the privilege of serving under him. His recent death had been a great personal loss to many.

He did not propose to dwell at any length on controversial matters, not even on the question which was exercising the minds of railwaymen and their customers at the present time—the future of transport. He might, however, remind his hearers that the achievements which they celebrated, and the progress of a century on which they were looking back, took place under a system of private enterprise. They had been told more than once that it was the considered opinion of the present Government that the public interest required the transfer of the railways from their present proprietors to some form of state ownership. He felt bound to say that no very convincing arguments had been produced to show that this transfer would be productive of greater efficiency.

There was a nice round phrase often used by Government spokesmen, that a particular industry is "ripe for nationalisation." That phrase was revealing. The State did not sow the seed; it did not tend the young plant, or assist its growth. It waited until the gardeners had done their work, and when the fruit was "ripe," proceeded to pluck the luscious morsel.

It was still true that the State's most useful function was negative rather than positive. It was a regulator and a controller of all economic activity—not an inspirer or creator. When, for example, the State wished to stimulate one particular form of building, it did not follow the example of private enterprise by assembling the necessary labour and materials, and getting to work. Instead, it issued a Direction, over the signature of the Minister, to the effect that no one should, under heavy pains and penalties, undertake any form of building except the kind which the Government desired to promote. He found it hard to believe that that was the best way of getting things done. Too often it led merely to a general paralysis of enterprise and activity.

However that might be, those responsible for the management of the British railways would continue to give of their best in the service of the public. There was a great tradition—a hundred years or more of it—of service behind the railways. He believed that that tradition would still persist a hundred years on—but it could only survive if the nation refused to allow those great undertakings to become a political playground and their myriad wheels to be clogged with the tapes and jackets of bureaucracy.



## General John C. H. Lee

*Luncheon by R.E.C. prior to tour of British ports*

General John C. H. Lee, who was Commanding Officer for the American Supply Services in the European Theatre during the war, recently returned to England to make a short tour of the main ports in which the American Army was interested, to enable him to express the thanks of the U.S. Army to the workers in those ports for the part they had played in making the invasion of Europe from this country a success. The beginning of his tour was marked by a luncheon given by the Railway Executive Committee to General Lee, and members of his staff, at the Charing Cross Hotel, on Thursday, June 20.

Sir James Milne, Deputy Chairman of the R.E.C., presided, and in addition to the members of the R.E.C. (Lord Ashfield, Sir Eustace Missenden, Sir Charles Newton, and Sir William Wood) the luncheon was attended by the Rt. Hon. Alfred Barnes, M.P., Minister of Transport, Major-General Sir N. G. Holmes, and the principal railway officers who were closely associated with General Lee during his stay in this country.

In welcoming General Lee, who was accompanied by his wife, Sir James expressed his regret that the secretaries of the three railway trade unions had been unable to attend the function. He mentioned that on June 20, 1942, the R.E.C. received a letter bearing the somewhat strange and then novel wording "Head-quarters, S.O.S., E.T.O., U.S.A.," signed by John C. H. Lee, and asking for an immediate meeting. By a happy coincidence the luncheon was being held on June 20, 1946—the fourth anniversary of the first meeting of the R.E.C. with General Lee.

Sir James recalled the Committee's impression of their guest's vivid conception of the immensity of the task which then lay ahead, and said it was a striking tribute to General Lee's personality that the special train provided for his use was given the code name "Alive." After giving some brief details of the task accomplished by the British railways during the war, Sir James expressed the view that the efforts of the British and U.S. staffs were successful because all concerned worked together as a team.

The Minister of Transport then spoke in felicitous terms of General Lee's work and organising skill and ability, and warmly commended the object of his visit.

General Lee, in responding, said the purpose of his visit was best described in the following message which he had just received from General Dwight Eisenhower:—

"I am delighted that you have found it possible to return to Great Britain to pay a personal tribute to the railway transport and port officials and workers whose magnificent services meant so much to the U.S. Forces in Europe during the Great War. In doing so I hope that you will again assure those officials of my lasting gratitude for the contribution they made to victory, and particularly for the unstinted co-operation they habitually gave to the U.S. Forces."

He also read a message from General Devers commending the railway and port workers for their splendid efforts which had made such a magnificent contribution to the success of our common enterprise. After reviewing the colossal task which confronted the Allies in 1942, the General

spoke with great appreciation of the efforts of the railways in moving the vast numbers of troops and colossal tonnages of warlike stores of every kind to and from the ports, and asked Sir James to convey his grateful thanks to all those who were in any way responsible for the successful accomplishment of the great task.

We understand that General Lee's tour is being made by special train and will cover Bristol, Dartmouth, Kingswear, Plymouth, Southampton, Liverpool, Manchester, Glasgow, Greenock, Hull, Immingham, Swansea, and Cardiff, at each of which places he will address the dock workers.

## Birmingham Railway and Traders' Conference

The Railway & Traders' Conference for the Birmingham, South Staffordshire, East Worcestershire, and North Warwickshire Area held its annual meeting in Birmingham on June 14, under the chairmanship of Mr. C. E. Jordan (Accles & Pollock Limited) who attended also on behalf of the Federation of British Industries. Mr. Jordan was supported by a representative body of traders; and on the railway side the meeting was attended by the local district goods and passenger officers of the G.W.R. and L.M.S.R.

Mr. Jordan recalled that these local railway and traders conferences were set up by the Railways Act of 1921 to examine matters of common interest in the respective areas, and he expressed the hope that, whatever plans the Government might have for the future of the transport industry, provision would be made for the maintenance of these conferences, which were so fruitful in achieving a proper spirit of co-operation between the railways and local industry. If that provision were made, traders could be happy in the assurance of ready contact with railway officers who were known to them and who were well acquainted with the problems and requirements of the trading community.

Mr. J. A. Warren-King (District Goods Manager, Birmingham, G.W.R.) endorsed the hope expressed by the Chairman that the conference would continue to fulfil its very useful functions whatever the future organisation of the railways. He spoke of the earnest desire of the railways to give all the assistance in their power to the development of trade and industry in the locality, and in building and fostering national prosperity, conscious as they were that in helping traders they were helping themselves.

Support for the remarks of the principal speakers was voiced on the traders' side by Mr. A. Brown (Guest, Keen & Nettlefolds Limited) and Mr. Felix J. Blakemore, O.B.E., J.P. (E. Blakemore & Sons Limited); and on behalf of the railways by Mr. L. C. Brittlebank (District Goods Manager, Birmingham, L.M.S.R.) and Mr. A. V. R. Brown (Divisional Superintendent, Birmingham, G.W.R.) both of whom spoke of the valuable contribution the conference had made in the past, and was capable of making in the future, to trade and transport in the locality.

A.B.C. COUPLER & ENGINEERING CO. LTD.—Net profit for the year to September 30, 1945, was £6,694, as compared with £6,534. The Directors have declared a dividend of 15 per cent., as in the previous year, together with a bonus of 2½ per cent.

## Long-Distance Coach Services

Recent weeks have seen the resumption of many of the railway-associated long-distance coach service workings, which, with those recorded in our May 3 issue (page 496), bring the network up to its summer strength and cover the majority of the routes in operation before the outbreak of the war. The following are the principal services, showing dates of resumption:—

**South Coast Express Service (Southdown Motor Services Limited and East Kent Road Car Co. Ltd.)**—From May 13. Margate-Dover-Hastings-Eastbourne-Brighton-Portsmouth.

**Orange Brothers Limited.**—From June 2. London-Doncaster-Darlington-Sunderland-Newcastle.

**Aldershot & District Traction Co. Ltd.**—From June 3. London-Egham-Aldershot-Farnham.

**Royal Blue Express Services (Western National Omnibus Co. Ltd. and Southern National).**—From June 3. London-Marlborough-Bristol-Weston-super-Mare (joint with Greyhound); London-Salisbury-Exeter-Truro-Penzance; Bournemouth-Yeovil-Taunton-Minehead-Lynton-Illfracombe.

**Associated Motorways.**—From June 3. A network based on Cheltenham, with services from that point to London (three routes); Swansea (two routes); Treherbert; Blairston; Bristol and Exeter; Bournemouth (two routes); Portsmouth (two routes); Kettering; Nottingham; Derby; Aberystwyth; Coventry; Paignton. There are also cross-country services, Bristol-Bournemouth; Bristol-Portsmouth; Nottingham-Bournemouth; Nottingham-Portsmouth; Birmingham-Bournemouth; Birmingham-Portsmouth.

**Majestic Express Motors Limited. (Joint with Birmingham & Midland Motor Omnibus Co. Ltd. and North Western Road Car Co. Ltd.)**—From June 3. London-Birmingham-Manchester.

**Birmingham & Midland Motor Omnibus Co. Ltd.**—From June 3. London-Birmingham; from June 8, London-Birmingham-Llandudno.

**Maidstone & District Motor Services Limited.**—From June 6. London-Maidstone-Tenterden; London-Hastings-Bexhill; London-Chatham-Sheerness; London-Hawthorpe-Rye.

## Parliamentary Notes

### Railways (Valuation for Rating) Bill

The Railways (Valuation for Rating) Bill was re-committed to a committee of the House of Commons on June 21 to consider the following new clause:—

*Superannuation, etc., of employees of Railway Assessment Authority*

(1) The Railway Assessment Authority shall be a local authority within the meaning of the Local Government Superannuation Act, 1937, and that Act shall have effect as if (a) the Railway Assessment Authority were included among the local authorities specified in Part I of the First Schedule to that Act; and (b) the area of the Railway Assessment Authority were situate within the administrative county of Surrey.

(2) For the purpose of the said Act, the Local Government Staffs (War Service) Act, 1939, and the Pensions (Increase) Act, 1944: (a) service under the Railway Assessment Authority before the coming into effect of this section shall be treated as always having been service under a local authority; and (b) where any employee of the Railway Assessment Authority has (whether before or after the coming into effect of this section) devoted part of his time to employment by the Joint

Authority, that employment and any remuneration in respect thereof shall be treated as employment by, and remuneration under, the Railway Assessment Authority.

(3) The Joint Authority shall from time to time pay to the Railway Assessment Authority such proportion of any expenses incurred by the Railway Assessment Authority by reason of this section in respect of persons who have served both those authorities as may be agreed between those authorities or, failing agreement, be determined by the Minister.

(4) In paragraph 8 of Part I of the Second Schedule to the principal Act, and in that paragraph as applied to the London Passenger Transport Board, the words " (including in the case of a permanent officer such superannuation allowance or gratuity on retirement) " are hereby repealed.

(5) This section shall be deemed to have come into effect on the first day of April, nineteen hundred and forty-six.

After the new clause had been brought up and read the first time,

Mr. T. Braddock (Mitcham—Lab.) moved that the clause be read a second time. He said the clause was somewhat technical, but, in short, it attempted to make superannuation provision for a staff employed by a railway assessment authority in Surrey. That small staff was drawn from the local government service in question, and he understood that that authority was willing to make arrangements to return them to the membership of their staff, with full superannuation arrangements. He hoped that this somewhat long, but basically simple, addition to the Bill would receive the sympathetic consideration of the Minister. It might be that this was too clumsy a way of dealing with the matter, and there might be an easier way, but, at any rate, he thought the suggested new clause made clear the essential requirements.

Mr. C. W. Key (Parliamentary Secretary, Ministry of Health) said discussions had taken place on this matter among all the interested parties—the Railway Assessment Authority, the Joint Authority, representatives of the employees, and so on. In consequence, he understood that this new clause had been drafted as a result of complete agreement among the interested people. In view of that, and of the sort of representations which had been made to the Ministry by a deputation of the employees of the authority concerned, the Minister was ready and willing to accept the new clause.

The Clause was read a second time and added to the Bill.

The Bill as amended passed the report stage, and was read a third time and passed.

## Questions in Parliament

### Travelling Facilities for Trainees

Mr. Goronwy Roberts (Carnarvon—Lab.) on June 18 asked the Minister of Labour & National Service if he was now in a position to announce any change in travelling facilities for persons undergoing training in Government training centres.

Mr. George Isaacs (Minister of Labour & National Service): Yes. It has been decided that persons in training at Government training centres shall be allowed one free travel warrant during a six-months' course to enable them to travel home for a holiday at any time when they are entitled to holiday leave.

### Transport of Fish

Commander Douglas Marshall (Bodmin—C.) on June 5 asked the Minister of Food what were the future plans with regard to providing refrigerated transport and other similar methods for the carrying of fish.

Wing-Commander John Strachey (Minister of Food): I have been in consultation with the Minister of Transport on this matter. I understand that the railway companies are reviewing the whole problem and propose to resume the experiments which they began before the war. Meanwhile my department has today taken steps which may result in some immediate improvement in respect of herrings.

### Lineside Fires

Mr. A. T. Lennox-Boyd (Mid Bedford—C.) on June 18 asked the Minister of Transport whether he would take steps to compel the railway companies to cover engine funnels with a view to reducing the risk of flying sparks, especially in the summer months, and provide fire guards, working in conjunction with local farmers, to help quell outbreaks of fire.

Mr. Alfred Barnes in a written answer stated: I understand that there are at present no known means of preventing entirely the emission of sparks from coal-burning locomotives; but improvements in design have effected a progressive reduction. Arrangements are already in force on the railways for detecting and extinguishing lineside fires and the additional manpower required to provide special fire guards would not be justified. Farmers

have been advised as to the steps they can take to minimise the risk of, and damage from, these fires.

### Road Safety Campaign

Mr. B. Janner (Leicester West—Lab.) on June 6 asked the Minister of Transport how much money was at present being spent on research and publicity relating to road accidents and on new roads and road improvements, respectively.

Mr. Alfred Barnes in a written answer stated: The Government has just completed the expenditure of £250,000 on poster and press advertising about the need for greater safety on the roads and consideration is being given to an extension of the campaign. In addition, 50 per cent. grants have been made, or will shortly be made, to proposed expenditure amounting to £180,000 approximately, for local safety activities, and substantial financial assistance is being given to the Royal Society for the Prevention of Accidents in the work which it is doing. Research into road safety will be carried out by the Road Research Board and by my department, but I cannot say at present how much money will be spent on this during the current financial year. As regards the construction of new roads and the improvement of existing roads, schemes to the value of about £650,000 have been approved for grant since April 1 last.

## British Railway Mileage and Rolling Stock

We have commented many times on the statistical blackout that has been imposed on British railways since the outbreak of the war, with the result that the last comprehensive official figures are those in respect of the year 1938. The need for this secrecy has now ceased to exist, but the actual reports of the four main-line railway companies for 1945 continued to omit their statistical returns, on the instructions of the Ministry of War Transport.

Subsequently, however, a summary table of statistical returns of the railways of Great Britain for the years 1938 to 1944 was published by H.M. Stationery Office,

and was noticed in our issue of April 19, 1946, page 423. The main figures were totals for all the railways of Great Britain excluding those of the London Passenger Transport Board and the Manchester Ship Canal Company, but there was no indication of the relative figures of the four main-line companies.

Now, by courtesy of the Ministry of Transport, we have been supplied with the following table, showing the mileages of lines, and rolling stock statistics, for each of the individual four main-line companies for the years 1939 to 1944 (inclusive). These figures were prepared by the R.E.C. Statistical Committee.

MILEAGE OF LINES, AND ROLLING STOCK STATISTICS, FOUR BRITISH MAIN-LINE COMPANIES—YEARS 1939-1944

		1939 Miles	1940 Miles	1941 Miles	1942 Miles	1943 Miles	1944 Miles
<b>Mileage of lines open for traffic</b>							
Length of road—first track ...	G.W.R. ...	3,778	3,758	3,753	3,743	3,743	3,743
	L.N.E.R. ...	6,349	6,348	6,340	6,338	6,338	6,335
	L.M.S.R. ...	6,825	6,821	6,807	6,806	6,803	6,799
	S.R. ...	2,158	2,155	2,154	2,154	2,156	2,156
	No.	No.	No.	No.	No.	No.	No.
<b>Locomotives</b>							
	G.W.R. ...	3,705	3,693	3,760	3,833	3,872	3,894
	L.N.E.R. ...	6,509	6,522	6,552	6,582	6,447	6,425
	L.M.S.R. ...	7,566	7,557	7,591	7,651	7,818	7,980
	S.R. ...	1,831	1,812	1,818	1,860	1,851	1,831
<b>Rail motor vehicles</b>							
Passenger carrying—Electric ...	G.W.R. ...	—	—	—	—	—	—
	L.N.E.R. ...	113	229	257	269	269	300
	L.M.S.R. ...	269	268	265	262	265	265
	S.R. ...	1,593	1,580	1,566	1,565	1,564	1,557
Passenger carrying—Other than electric	G.W.R. ...	18	32	36	38	38	38
	L.N.E.R. ...	78	73	70	68	56	40
	L.M.S.R. ...	10	10	10	10	9	9
	S.R. ...	1	1	1	—	—	—
Non-passenger carrying—Electric ...	G.W.R. ...	—	—	—	—	—	—
	L.N.E.R. ...	—	3	3	3	3	3
	L.M.S.R. ...	—	—	—	—	—	—
	S.R. ...	—	—	—	—	—	—
<b>Coaching vehicles</b>							
Total passenger-carrying vehicles including rail motors	G.W.R. ...	5,933	5,911	5,946	5,933	5,901	5,862
	L.N.E.R. ...	12,372	12,438	12,436	12,427	12,357	12,231
	L.M.S.R. ...	17,527	17,176	16,916	16,718	16,549	16,281
	S.R. ...	6,680	6,516	6,437	6,319	6,190	6,104
Other coaching vehicles ...	G.W.R. ...	2,738	2,728	2,792	2,782	2,779	2,791
	L.N.E.R. ...	6,708	6,276	5,921	5,814	5,749	5,663
	L.M.S.R. ...	6,248	6,226	6,131	6,038	5,855	5,842
	S.R. ...	1,888	1,915	1,798	1,903	1,940	1,943
<b>Merchandise and mineral vehicles</b>							
	G.W.R. ...	83,028	84,335	85,812	87,927	88,605	88,998
	L.N.E.R. ...	256,159	258,686	258,212	258,162	259,187	258,933
	L.M.S.R. ...	287,598	289,347	289,155	292,244	294,804	297,788
	S.R. ...	33,813	34,698	35,211	35,999	37,581	37,644
<b>Service rolling stock</b>							
(Excluding service locomotives)	G.W.R. ...	9,104	8,928	9,248	8,809	8,868	9,168
	L.N.E.R. ...	11,829	11,742	11,445	11,172	10,919	10,568
	L.M.S.R. ...	14,477	14,910	15,540	15,710	15,564	15,672
	S.R. ...	1,696	1,710	1,755	1,777	1,830	1,982

## Great Western of Brazil Railway Co. Ltd.

The annual general meeting of the Great Western of Brazil Railway Co. Ltd. was held at River Plate House, London, E.C.2, on June 26, Mr. W. M. Codrington, C.M.G., M.C., Chairman of the company, presiding.

The Secretary, Mr. F. O. Ellis, read the notice convening the meeting and the auditors' report.

In a statement issued with the report and accounts, the Chairman said the trends he described in his last statement continued during the past year. Once again they were called on to face an increase in wages of no less than 40 per cent., which was put into force on May 1, 1945. They also received authority to make increases in charges, but as many of these were governed by contractual arrangements, the full benefit was not received till later in the year. These factors made any comparison, either of financial or operating statistics, with those of previous years, more than ordinarily difficult. Once again the railway was called upon to handle traffic on a scale which a few years ago would have been regarded as beyond its capacity.

The final result of the accounts for the year was a deficit on net revenue account of £29,574. It was of little consolation to shareholders that the result followed a year of intense activity from the operating point of view. Gross receipts surpassed the record of 1944 by no less than 14 million cruzeiros. Working costs had slightly outstripped the increase in takings. The wages bill, for instance, amounted to some £488,000 as compared with £203,000 in 1942.

The accounts this year had been modified in order to conform with the standardised system in force on the Government Railways in Brazil. As a result, against the heading of "Administration and General Charges," the much increased figure of £161,620 appeared. This, however, included charges, such as those for employees' pension fund, cost of stores and fuel control, and so on, which used to be spread between the various departments concerned. For the same reason the cost of locomotive and vehicle running, and running shed expenses, were now debited to a new heading entitled "Traffic and Movement."

In the accounts they had provided an increased amount as a reserve against the nominal value of the Brazilian War Bonds which they acquired under recent legislation, since repealed, and which they realised at a loss. This charge should not now recur.

During the year, owing to the stringency of the cash position, they were able to pay off only one half-year of the arrears of debenture interest, which on January 1, 1946, stood at £75,113.

It had not yet been possible to revert to the pre-war practice of printing the principal operating statistics. That the operation of the line was efficient, was, however, indicated by the fact that though the total ton-kilometres transported was slightly lower than in the previous year, the average loaded freight car load, at 13.17 tons, constituted a record; while the freight train load was only slightly inferior to the record achieved in 1943.

In present circumstances the financial results which could be achieved by the company were dominated principally by the general economic conditions of the country, and secondly by the crop situation. As regards the first, there was at

present little sign that the tendency for all costs to rise had been arrested. As regards the second, present indications were that this year's sugar crop would exceed that of last year, and should start to move at an earlier date. They were therefore naturally intensifying efforts to strengthen track and equipment to handle any increase in traffic.

The successive increases in railway rates had not yet resulted in any considerable diversion of traffic to the roads; but petrol rationing had now come to an end and the importation of lorries and omnibuses was likely to be intensified. In these circumstances, it became more than ever important to offer service competitive in efficiency as well as in cost. For this reason the approaching completion of the new ferro-concrete viaducts on the Central Section and the concentration of terminal goods traffic at Cinco Pontas Station were particularly welcome. The first of these important works had been financed out of the loan granted by the Brazilian Government; the latter was the subject of a direct grant from the Brazilian Treasury. They would enable them to make better use of rolling stock and give a better service.

War conditions compelled them to break the close contact between London and Brazil which had always been a tradition of the company. The Chairman was particularly glad, therefore, to report that during last year their new General Manager, Mr. Dobson, visited this country for consultation, and that early this year two members of the Board, Major-General

Lord Bridgeman and Brigadier Storar, inspected the company's property and conferred with the company's officials in Pernambuco and with Dr. Gudín and the Local Board in Rio de Janeiro.

Brigadier Storar subsequently visited the U.S.A. in order to study the extent to which modern developments in American railroad technique might be applicable to the conditions obtaining on their system. Under their agreement with the Brazilian Government for the construction of extensions, they would shortly be providing them with further rolling stock. Brigadier Storar's investigation was thus particularly opportune.

The company had recently suffered a severe loss in the death at an early age of Dr. Jose Lins. His place on the Local Board had been taken with Dr. Manoel Leao, whose achievements as their General Manager in Recife during the recent most difficult years, were well known.

To succeed Dr. Leao in Recife, the board had appointed Mr. R. H. Dobson, hitherto Traffic Manager, to be General Manager of the company. The Chairman had greatest confidence in Mr. Dobson's knowledge of the country and in his ability as a practical railwayman.

Their thanks were due to all these gentlemen, to Dr. Baptista, their Rio Representative, to their staff on the line and, above all, to their colleague, Dr. Gudín, for their efforts on the company's behalf during the past year. To Mr. Ellis and the staff of the London office their thanks were due for their excellent services.

The report and accounts were adopted.

## British Electric Traction Co. Ltd.

The fiftieth annual general meeting of the British Electric Traction Co. Ltd., was held at Winchester House, Old Broad Street, London, E.C.2, on June 21, Mr. R. J. Howley, C.B.E., Chairman of the company, presiding.

The Secretary, Mr. R. J. Ellery, read the notice convening the meeting.

The Chairman, in moving the adoption of the report and accounts, made special reference to the steadily mounting wage costs. Powerful unions, he said, were putting forward claims that rates of pay and conditions of employment should be standardised throughout the country. These demands were made regardless of the fact that intensity of effort and living conditions varied greatly in different areas, and that the necessary outgoings of a working man were very much heavier in urban areas than in country districts. Many of the demands for increased wages made to-day went for settlement before a standing tribunal set up by the Government. A tribunal of this kind was bound to be affected by the atmosphere of the times, and its findings influenced far too much decisions in other cases, which seldom were comparable with those which were being heard.

A court specially set up, consisting of an *ad hoc* chairman chosen by agreement between the parties from experienced members of the Bar, sitting with two assessors, one nominated by the employers and one by the employees, would in his opinion constitute a better form of tribunal.

The Chairman referred to the growing feeling of uncertainty which existed with regard to the future of transport, electricity supply, and gas undertakings. The industries in which these undertakings were

engaged were on the programme of the present Government for inclusion in the great gamble of nationalisation. Definite schemes had not yet been submitted to Parliament, and it was hoped that the experience gained in preparing plans for the coal and other industries would show the necessity, in the public interest, of examining thoroughly the question whether nationalisation of these industries would give the public better service, before legislation was actually introduced.

Speaking of the early years of the company, the Chairman recalled how in pioneering the electrification of horse and steam tramways it had been faced with the advent of a new form of passenger road transport. It was apparent that motor omnibuses would become a serious competitor of the tramcar, and it was decided to operate motor omnibus services. The change from tramcar to motor omnibus involved the scrapping of many assets on which large sums of money had been spent, and the losses entailed brought hard times for the stockholders. By 1915 the financial strain had become acute, and £908,372 had to be written off the capital of the company.

From time to time comment was made on the high rate of dividend paid on the deferred stock. The Chairman said he would like stockholders to understand that this was largely brought about by the retention in the business of reserves and undivided profits amounting to nearly £3,000,000.

The Directors' report, recommending out of the net profits of £337,562 the same dividend distributions as last year, with the addition of a jubilee year bonus of 10 per cent. on the deferred stock, was unanimously adopted.



## Notes and News

**Stationmaster Required.**—A stationmaster is required by the Government of Tanganyika Territory for the Railways and Port Services for one tour of 24 to 36 months with possible permanency. For full particulars see Official Notices on page 723.

**Agreed Charges.**—Applications for the approval of 78 further agreed charges under the provisions of Section 37 of the Road & Rail Traffic Act, 1933, have been lodged with the Railway Rates Tribunal. Notices of objection must be filed on or before July 9 next.

**L.P.T.B. (Extension of Time) Order.**—The Minister of Transport has made the London Passenger Transport Board (Extension of Time) Order, 1946 (S.R. & O., 1946, No. 700). Copies may be obtained from the Clerk of Stationery, Ministry of Transport, Berkeley Square House, London, W.1, price 1d. (post free 2d.).

**C.P.R. Preference Dividend.**—At a meeting of the Board of Directors of the Canadian Pacific Railway Company held in Montreal on June 10, a dividend of 2 per cent. on the preference stock in respect of the year 1946 was declared payable on August 1, 1946, to stockholders on record at 3 p.m. on July 1, 1946.

**North Western of Uruguay Debenture Interest.**—The directors of the North Western of Uruguay Railway Co. Ltd., announce that it has been decided, in consultation with the stockholders' committee, to pay, on Friday, July 5, 1946, arrears of interest on the above stock in respect of the year ended December 15, 1935. The transfer registers will be closed from June 21 to July 4, 1946, both days inclusive.

**District Mechanical Engineer (Workshops) Required.**—A district mechanical engineer (workshops) is required by the Iraqi State Railways for three years in the first instance. Candidates should be A.M.I.Mech.E., or hold a degree in engineering, have served a pupilage or apprenticeship in the works of a British railway or firm of locomotive builders and subsequently have had experience in the manufacture and repair of locomotives. See Official Notices on page 723.

**Charges Consultative Committee.**—A public inquiry will be held by the Charges Consultative Committee in King's Bench Court X, at the Royal Courts of Justice, Strand, W.C.2, at 10.30 a.m. on September 16, to consider the best method of adjusting the charges made by the controlled railway companies and joint lines so that the balances of their net revenue accounts for 1947 will approximate to the aggregate of the fixed annual sums (£38,633,000) payable by the Government to the controlled railway companies under the Railway Control Agreement. See Official Notices, page 723.

**Birmingham Railway Carriage & Wagon Co. Ltd.**—A statement by Sir Bernard Docker, Chairman, circulated with the report and accounts of the Birmingham Railway Carriage & Wagon Co. Ltd. at the annual general meeting, said that the order books in the railway rolling stock industry were well filled. They could not live on order books, however, and until they could obtain the necessary materials and labour to turn the orders into com-

pleted work, the immediate future must remain obscure. He was pleased to report that they had re-established contact with most of their overseas customers, considerable business had been obtained, and more was obtainable if they were able to meet the delivery required.

**New York-Vienna via Eire.**—The New York to Eire service of Pan-American Airways was extended on June 16 to serve Brussels, Prague, and Vienna. Passengers from Eire may use the service to and from the Continent by joining the aircraft at Shannon Airport. The New York-Vienna flights are made twice weekly.

**Proposed Internal Air Services.**—The British European Airways Corporation is planning to introduce London-Manchester-Belfast, and Belfast-Isle of Man services in July. Routes serving Belfast, Blackpool, and London; Belfast and Newcastle; and Belfast, Liverpool, Manchester, and London are proposed for later dates which have not yet been fixed.

**Central Uruguay Railway Debentures.**—The Directors of the Central Uruguay Railway Co. of Monte Video Ltd. announce that, in accordance with Article 5 of the scheme of arrangement, a payment will be made on July 9, 1946, of one year's arrears of interest on the 4½ per cent. first debenture stock in respect of the period from January 1 to December 31, 1944. The transfer books will be closed from June 25 to July 8, 1946, both days inclusive.

**Additional L.M.S.R. Sailings to Eire.**—On Fridays and Saturdays from June 28 until August 31, inclusive, there will be new sailings on the L.M.S.R. Holyhead-Kingstown route from Holyhead at 6 a.m., and Kingstown at 6.30 p.m. New expresses will leave London (Euston) for Holyhead at 9.40 p.m., Thursdays and Fridays, and Holyhead for Euston at 12.1 a.m., Saturdays and Sundays. Connecting services will also be provided for Birmingham, Liverpool, Manchester, and other provincial centres.

**Patents: "Licences of Right."**—Notice has been given that applications have been made for the cancellation of the Indorsements "Licences of Right" on the following patents:—

No. 476,819, dated July 15, 1936, in respect of totally enclosed fan cooled dynamo electric machines (patentee: English Electric Co. Ltd.).

No. 514,804, dated June 3, 1938, in respect of electrical switchgear (patentee: English Electric Co. Ltd.).

Any person may give notice of opposition to any of the applications by lodging Patents Form No. 24 at the Patent Office, 25, Southampton Buildings, London, W.C.2, on or before July 5.

**E.C.I.T.O. London Office.**—A Regional Office of E.C.I.T.O. (European Central Inland Transport Organisation) has been established at 40 Grosvenor Square, London, W.1, to provide liaison between E.C.I.T.O. and various government agencies and relief organisations in London. The Director is Lt-Colonel C. H. W. Edmonds. In addition to the general work of the Regional Office, there is a special Movements (Rear) Office at the same address, in charge of Mr. C. S. Dunbar, which will deal with work arising out of the International Movements Programme and will also act as liaison with the military authorities. The next full meeting of the International Movements Pro-

gramme Conference will be held at the London office on July 2. As recorded in our June 21 issue, the headquarters of E.C.I.T.O. is now in Paris.

**Birmingham & Midland Motor Omnibus Co. Ltd.**—At the forty-first ordinary general meeting of the company held on May 24 last, the Chairman referred to the arrangements which had been made during the year for the provision of connecting services at railway stations and to the facilities created to enable a rail passenger to complete his journey by road, where there

## British and Irish Railway Stocks and Shares

Stocks	Highest 1945	Lowest 1945	Prices	
			June 25, 1946	Rise/ Fall
G.W.R.				
Cons. Ord. ....	60½	47½	56½	—
5% Con. Pref. ....	124½	104½	117	—
5% Red. Pref. (1950) ..	107½	101½	104½	—
5% R. Charge .....	137½	120	129½	—
5% Cons. Guar. ....	135½	117	126½	—
4% Deb. ....	118	106	117	—
4½% Deb. ....	119½	108	117½	—
4½% Deb. ....	124½	111½	120	—
5% Deb. ....	138	124	133½	—
2½% Deb. ....	83	74½	87½	—
L.M.S.R.				
Ord. ....	33	23½	27½	+ ½
4% Pref. (1923) ....	65	50	55	—
4% Pref. ....	80½	69½	79½	—
5% Red. Pref. (1955) ..	106½	99½	102½	—
4% Guar. ....	106½	97	100½	—
4% Deb. ....	110½	102	108	—
5% Red. Deb. (1952) ..	110½	103½	106½	—
L.N.E.R.				
5% Pref. Ord. ....	8½	5½	5½	—
Def. Ord. ....	4½	2½	2½	—
4% First Pref. ....	62½	49½	55	—
4% Second Pref. ....	33½	24½	26½	+ ½
5% Red. Pref. (1955) ..	103	96	100	—
4% First Guar. ....	104½	95	100½	—
4% Second Guar. ....	97	89½	94	—
4% Deb. ....	91½	82½	93	—
4% Deb. ....	109½	101	108	—
5% Red. Deb. (1947) ..	103½	100	100	—
4½% Sinking Fund ..	106½	103	104½	—
Red. Deb. ....	106½	103	104½	—
SOUTHERN				
Pref. Ord. ....	79½	63	73	+ 1
Def. Ord. ....	27	20½	20	—
5% Pref. ....	124½	104	116	—
5% Red. Pref. (1964) ..	117	107	110½	—
5% Guar. Pref. ....	135½	117	125½	—
5% Red. Guar. Pref. (1957) ..	117	106½	112½	—
4% Deb. ....	117	104½	115	—
5% Deb. ....	137	124	131½	+ 1
4% Red. Deb. (1962-67) ..	112	104½	108½	—
4% Red. Deb. (1970-80) ..	113½	104	109½	—
FORTH BRIDGE				
4% Deb. ....	106	103	106	+ 1
4% Guar. ....	106	101	103	—
L.P.T.B.				
4½% "A" ....	125	117	124½	—
5% "A" ....	135	127	133½	—
3% Guar. (1967-72) ....	100	97½	104	—
5% "B" ....	125½	115	120½	—
5% "C" ....	70	58	60	—
MERSEY				
Ord. ....	37	31½	30½	—
3% Perp. Pref. ....	72½	68½	72	—
4% Perp. Deb. ....	104½	104	105	—
3% Perp. Deb. ....	84	78½	82½	—
IRELAND*				
BELFAST & C.D.				
Ord. ....	8½	6	7½	—
G. NORTHERN				
Ord. ....	34	24½	40	+ 2
Pref. ....	52½	42½	62	+ 1
Guar. ....	80	68	91½	—
Deb. ....	97½	87½	101½	—
IRISH TRANSPORT				
Common ....	—	—	18/9	+ 3d.
3% Deb. ....	—	—	102xd	—

\* Latest available quotation

## OFFICIAL NOTICES

## Crown Agents for the Colonies

## COLONIAL GOVERNMENT APPOINTMENTS.

APPLICATIONS from qualified candidates are invited for the following post:—

**STATIONMASTER** required by the Government of Tanganyika Territory for the Railways and Ports Services for one tour of 24 to 36 months with possible permanency. Salary: £300 to £480 a year, plus cost-of-living and separation allowances at current rates. Commencing salary according to qualifications, experience and War Service. Outfit allowance, £30. Free quarters and passages. Candidates, preferably not over 30, should have had a good secondary education up to Matriculation standard and experience in passenger and goods work on a Home Railway. Additional experience with Yard Working and Control, also the Electric Train Staff or Tablet system of passing trains, would be an advantage. Apply at once by letter, stating age, whether married or single, and full particulars of qualifications and experience, to the Crown Agents for the Colonies, 4, Millbank, London, S.W.1, quoting M/N/16603.

**DISTRICT MECHANICAL ENGINEER (WORKSHOPS)** required by the Iraqi State Railways for 3 years in the first instance. Salary: Iraq dinars 90 a month, plus high cost-of-living allowance, I.D. 24 a month. (I.D. 1 = £1.) Free passages. The post is not pensionable but there is a Provident Fund. Candidates should be A.M.I.Mech.E. or hold a degree in engineering, have served a pupillage or apprenticeship in the works of a British Railway or firm of locomotive builders and subsequently have had experience in the manufacture and repair of locomotives. A knowledge of diesel locomotives is desirable. Apply at once by letter, stating age, whether married or single, and full particulars of qualifications and experience, to the Crown Agents for the Colonies, 4, Millbank, London, S.W.1, quoting M/N/12840.

**STATION DESIGN.** A striking example of modern British practice at the important wayside station of Luton. Reprinted from *The Railway Gazette*, July 7, 1944. Price 1s. Post free 1s. 2d.

**SECTIONED PERSPECTIVE VIEW OF LOCOMOTIVE FRONT END.** A notable drawing of L.M.S.R. class "7P" 4-6-2 locomotive of the latest type. Reprinted from *The Railway Gazette*, June 15, 1945. Price 2s. 6d. Post free 2s. 8d.

**THE RAILWAY SYSTEM OF JAMAICA.** A general description of the system and its traffic, with an account of economic problems; the motive power used; and some features of operation. By H. R. Fox, B.Sc., M.Inst.C.E., General Manager, Jamaica Government Railway. Reprinted from *The Railway Gazette*, January 5 and 12, 1945. Price 1s. Post free 1s. 2d.

were no rail facilities. At the same time 70 services, suspended during the war, had been restored, 204 services augmented and 14 new services introduced. Existing buses and coaches had been reconditioned and orders placed for 300 new buses, of which 200 would be built in the company's workshops. The report and accounts were adopted.

**New G.W.R. "Castle" Class Locomotive, "Viscount Portal."**—One of ten new G.W.R. "Castle" class locomotives, No. 7000, has been named *Viscount Portal* after the Chairman of the company. The engine is at present stationed at Newton Abbot and engaged on main-line express duties. Eight of the new "Castles," which have improved superheating, are already in service, and the remaining two will be completed shortly. There are now 140 "Castle" class locomotives in service.

**British Electric Traction Co. Ltd.**—The revenue of the British Electric Traction Co. Ltd. for the year ended March 31, 1946, amounts to £795,422, compared with £779,608 for the previous year. After deducting £62,031 for general expenses, and £316,350 for income tax (against £317,791), and after charging £79,479 for debenture stock interest, there is a balance of £337,562 available for appropriation, compared with £323,737 for the previous year. The directors recommend payment of the following final dividends and bonus for the year ended March 31, 1946: 5 per cent. on the participating preference stock, less tax (making 8 per cent. for the year);

## Charges Consultative Committee

## ADJUSTMENT OF CHARGES MADE BY THE CONTROLLED RAILWAY COMPANIES AND JOINT LINES.

THE above Committee, appointed by the Minister of Transport, to advise him upon any reference to them as to the method to be adopted in adjusting the rates, fares and charges of all or any of the controlled Railway Companies and London Passenger Transport Board, having been requested by the Minister:—

(1) To advise him as to the best method of adjusting the charges made by the controlled Railway Companies and Joint Lines, considered as a whole, in connection with their railways (excepting such as are covered by the definition of Railways of the Transport Board in paragraph 2 of S.R. & O. 1940, No. 2037), dock and canal undertakings and collection and delivery services, so that, for the year 1947, the aggregate of the balances of the net revenue accounts prepared by the controlled Railway Companies under Article 1 of the Railway Control Agreement, together with the appropriate proportion of the balances of the net revenue accounts of Joint Committees, will approximate to the aggregate of the fixed annual sums (£38,633,000) payable by His Majesty's Government to the controlled Railway Companies under that Agreement.

(2) In considering such adjustments, to take into account all relevant considerations and, while aiming at an equitable distribution of charges between the various classes or groups of classes of traffic, to have regard to the Government's policy of full employment and to the importance of maintaining adequate coastwise shipping services.

(3) To hold a public inquiry and to hear thereat the representations of the Railway Companies, and of any Local Authority or Body representing the interests of passengers or traders or other forms of transport which may give notice of desire to be heard in such manner and within such time as the Committee may prescribe.

HEREBY GIVE NOTICE that a Public Inquiry will be held in King's Bench Court X at the Royal Courts of Justice, Strand, London, W.C.2, at 10.30 a.m. on Monday, September 16, 1946, when the Railway Companies will submit statements and estimates.

Any Local Authority or Body representing the interests of passengers or traders or other forms of transport desiring to be heard at this Inquiry must forward their full name and address with a statement of the interest represented, to—  
The Secretary,  
Charges Consultative Committee,  
Railway Rates Tribunal Office,  
Wellington House,  
125-130, Strand,  
London, W.C.2.

on or before Friday, August 2, 1946.

W. S. COVELL,  
Secretary.

June 24, 1946.

4 per cent. on the preferred ordinary stock, less tax (making 8 per cent. for the year); 30 per cent. on the deferred ordinary stock, less tax (making 45 per cent. for the year); 10 per cent. jubilee year bonus on the deferred ordinary stock, less tax. These appropriations leave £17,491 to be transferred to undivided profits account.

**Colvilles Limited.**—Trading profit for 1945, after taxation and contingencies, was £564,235, against £537,199 for 1944. Dividends from subsidiaries brought in £86,438, as compared with £94,212. After providing £350,000 for depreciation and obsolescence as in the previous year, the Directors again declare a dividend on the ordinary stock of 8 per cent. The forward balance is raised from £320,217 to £397,809.

**Argentine Railways Interest Moratorium.**—The Scheme of Arrangement sanctioned by the High Court on November 13, 1944, amending previous schemes, extended the moratorium in respect of the interest payable on the following stocks of the companies named: Buenos Ayres & Pacific Railway Co. Ltd., 4½ per cent. consolidated debenture stock; Argentine Great Western Railway Co. Ltd., 5 per cent. debenture stock; Buenos Ayres & Pacific Railway Co. Ltd., 5 per cent. (1912) debenture stock; Argentine Great Western Railway Co. Ltd., 6 per cent. guaranteed preference stock; and Villa Maria & Rufino Railway Co. Ltd., 4½ per cent. guaranteed stock. In view of the position shown by the accounts of the Buenos Ayres & Pacific Railway Co. Ltd.,

**RAILWAY Track Supply Firm** have vacancy on staff for Qualified Engineer with Permanent Way experience. Knowledge of workshop practice and metals an advantage.—Address, Box 13, *The Railway Gazette*, 33, Tothill Street, Westminster, London, S.W.1, stating age, qualifications, experience.

**INDUSTRIAL Glazing, Roof Repairs and Black-out** Removed in any part of the country.—Wells & Partners Ltd., Building and Roofing Contractors, 9, Raglan Street, Harrogate, Yorks. Phone: Harrogate 3061.

**LEADING British Engineering Company** in Calcutta have vacancies for:—  
One Rolling Mill Manager.  
One Smithy and Drop Stamping Manager.  
One Manager for Points, Crossings and Signal Fittings Works.  
One or two Cost Accountants.  
One Company Secretary (qualified Chartered Accountant).

Bachelors preferred in first instance. Excellent prospects.—Box No. 14, *The Railway Gazette*, 33, Tothill Street, Westminster, London, S.W.1.

**THE "PAGET" LOCOMOTIVE.** Hitherto unpublished details of Sir Cecil Paget's heroic experiment. Eight single-acting cylinders with rotary valve. An application of the principles of the Williams central-valve engine to the steam locomotive. By James Clayton, M.B.E., M.I.Mech.E. Reprinted from *The Railway Gazette*, November 2, 1945. Price 2s. Post free 2s. 3d.

**REPRINTS.**—The following interesting articles have been reprinted in pamphlet form, and are on sale at this office:—A National Transport Programme.—Is. The Railway Executive Committee and its Headquarters in Wartime.—5s. The Work of the Railway Clearing House, 1842-1942.—2s. 6d. L.M.S.R. Locomotive Casualty Report System.—1s. Coming of Age of Railway Grouping: G.W.R.; L.M.S.R.; L.N.E.R.; S.R.—2s. 6d. The "Paget" Locomotive.—2s. British-Built Austerity 2-10-0 Locomotive.—2s. The Coronation Scot—With Folding Plate.—3s. Diesel Locomotives for Industrial Shunting.—2s. L.M.S.R. General Utility Locomotives.—1s. Station Design.—1s. Sectioned Perspective View of Locomotive Front End with Folding Plate.—2s. 6d. Plastics in Railway Engineering.—1s. The Locomotive Carriage & Wagon Workshops of the Nigerian Railway.—1s. 6d. The Tyndale Electrified Lines of the L.N.E.R.—1s. New Southern Railway Passenger Luggage Van.—1s. New Montreal Central Station, Canadian National Railways.—5s. White-moor Marshalling Yard, L.N.E.R.—1s. The Railway System of Jamaica.—1s. The Railways of Persia.—2s. British Work on Persian Railways.—1s.  
If sent by post 2d. extra

the Stockholders' Committee, in pursuance of the authority given it by the scheme, has extended the moratorium period referred to in the scheme from June 30, 1946, to June 30, 1947.

**Tour of United Kingdom Ports by General Lee, U.S. Army.**—Lt.-General John C. H. Lee, former Commanding Officer for American Supply Services in the European Theatre, who arrived by air on June 19, left London on June 20 on a week's tour of United Kingdom ports, to thank port workers for the part they played in the invasion operations of North Africa and Europe. Before leaving London General Lee attended a luncheon party given by the railway companies at Charing Cross Hotel; he then visited Waterloo Station signal boxes, Southern Railway, after which he met the Minister of Transport, Mr. Alfred Barnes, at Berkeley Square House, and bestowed the American Medal of Freedom on former Regional Port Directors. Afterwards General Lee was the guest of H.M. Government at a dinner. At Southampton Docks, Southern Railway, which he visited on June 24, General Lee presented the American Medal of Freedom, with Palm, to Mr. R. P. Biddle, C.B.E., Docks & Marine Manager, and Mr. H. A. Short, C.B.E., Deputy Traffic Manager, Southern Railway (after Mr. Biddle's appointment as Deputy-Director of Ports, Ministry of War Transport, in February, 1941, Mr. Short took over the duties of Docks & Marine Manager until Mr. Biddle's release by the Government last October).

## Railway Stock Market

The rising trend of values in stock markets, which has been in evidence ever since the April Budget and recently was featured by an all-round rise in leading industrial shares, received a set-back this week. Profit-taking developed, but was not heavy, although with buyers showing caution, prices reacted sharply in some directions. Sentiment came under the influence of a variety of considerations, home and foreign political uncertainties having been accompanied by doubts whether the Government's cheaper money policy can be further developed at this stage; while the setback in leading industrials was attributed partly to the attention centred on the increasing number of new issues. Markets have been unresponsive to the latest export trade news, although conditions generally tended to become steadier, the reaction in prices earlier in the week being followed by some improvement in demand.

Argentine rails quietened down, hopes being centred on further news of the scope and aims of the important British mission to the Republic. It is generally agreed that it should achieve considerable success, and the City remains confident that whatever the decision in respect of the British-owned railways, the position of stockholders should be materially improved; bearing in mind that financial results of the companies and also the market value of all classes of stocks would have been materially higher had it not been for the heavy exchange losses arising from the level of the peso, there is hopefulness that even if nationalisation, or a scheme of Government *cum* private ownership were

decided upon, stockholders would receive a fair deal.

Home rails attracted little attention at the beginning of the week, reflecting the reduced business in markets; but later, prices were firmer, and several debenture stocks were in request. Possibly the interim dividends due next month may increase buying interest. Sentiment continues to be affected by the complicated nature of the whole question of nationalisation, although there is continued confidence that a fair compensation basis would show current prices to be considerably undervalued. Expectations are that the forthcoming interim decisions will be the same as a year ago; nevertheless, it is possible that they will have the effect of emphasising not only the large yields obtainable on home rail junior stocks and on preference stocks quoted under par, but also that the existing control agreement, implying dividends at around last year's levels, will remain in force until nationalisation is effected.

Compared with a week ago, Great Western has strengthened from 56½ to 56½; the 5 per cent. preference and guaranteed stocks at 117 and 126 respectively were unchanged, but the 4 per cent. debentures at 117½ gained ½. L.M.S.R. firmed up from 27½ to 27½, but the senior preference at 79½ and the 1923 preference at 55 were unchanged; the 4 per cent. debentures eased to 107½, while the guaranteed stock was 100½, compared with 102 for the previous week.

L.N.E.R. second preference at 26½ was maintained on balance as was the first preference at 55, but the first guaranteed

receded further from 101½ to 100½ and is now at the same level as L.M.S.R. guaranteed. L.N.E.R. second guaranteed was a point down at 94. Southern deferred remained at 20, but recognition that the price can be regarded as carrying the 2½ per cent. interim payment strengthened the preferred ordinary stock to 72½ after an earlier decline to 72½. London Transport "C" at 59½ was unchanged on balance, and Metropolitan Assented remained at 53½.

Argentine rails, although fairly active, failed to hold last week's gains, profit-taking developing. Buying interest appeared to centre mainly on debenture and preference stocks. Buenos Ayres Great Southern receded to 13, but the 5 per cent. preference at 30 regained part of an earlier decline, as did the 4 per cent. debentures at 72½. Buenos Ayres & Pacific consolidated debentures came back to 67½. Buenos Ayres Western, after reacting to 15, firmed up to 15½, and Central Argentine 4 per cent. debentures, after 67½, recovered to 68. Argentine North-Eastern "C" debentures at 20 were higher, but Entre Rios 4 per cent. debentures came back to 67½. Resumption of payments on account of arrears on Antofagasta preference pleased the market, but after a jump to 51 the price eased to 49; the ordinary stock firmed up to 11. Nitrate Rails shares, however, have come back sharply from 86s. 3d. to 80s. after the meeting. Mexican Railway 6 per cent. debentures kept firm at 76 on "break up" value estimates. Reflecting the recent set-back in New York markets, Canadian Pacific have receded from 25½ to 23½.

Traffic Table and Stock Prices of Overseas and Foreign Railways

Railways	Miles open	Week ended	Traffic for week		No. of Week	Aggregate traffic to date			Shares or Stock	Prices		
			Total this year	Inc. or dec. compared with 1944/5		Totals		Increase or decrease		Highest 1945	Lowest 1945	June 25, 1946
						1945/6	1944/5					
South & Central America												
Antofagasta ...	834	16.6.46	£ 27,350	— £ 4,440	24	£ 759,910	£ 739,910	+ £ 20,900	Ord. Stk.	12	8½	11
Arg. N.E. ...	753	8.6.46	ps. 280,700	— ps. 12,500	49	ps. 14,423,600	ps. 14,498,800	— ps. 75,200	"	10	5½	7
Bolivar ...	174	May, 1946	3,742	— 928	21	22,144	25,635	— 3,491	6 p.c. Deb.	8½	5½	6½
Brazil ...	—	—	—	—	—	—	—	—	Bonds	25	17	27
B.A. Pacific ...	2,771	15.6.46	ps. 2,072,000	+ ps. 272,000	50	ps. 113,291,000	ps. 109,075,000	+ ps. 4,216,000	Ord. Stk.	7	5	6½
B.A.G.S. ...	5,080	15.6.46	ps. 2,792,000	+ ps. 602,000	50	ps. 176,030,000	ps. 166,604,000	+ ps. 9,426,000	Ord. Stk.	13½	10½	13
B.A. Western ...	1,924	15.6.46	ps. 1,098,000	— ps. 32,000	50	ps. 60,046,000	ps. 56,667,000	+ ps. 3,379,000	"	12½	9½	15
Cent. Argentine Do. ...	3,700	15.6.46	ps. 2,884,370	+ ps. 33,320	50	ps. 157,254,726	ps. 144,373,050	+ ps. 12,881,676	"	9½	7	8½
Cent. Uruguay ...	970	15.6.46	38,257	— 3,373	50	1,999,682	1,776,923	+ 222,759	Ord. Stk.	7½	4	8½
Costa Rica ...	262	Apr., 1946	33,948	+ 5,306	43	286,820	231,946	+ 54,874	Stk.	16½	13	12½
Dorada ...	70	May, 1946	35,400	+ 400	21	150,675	148,595	+ 2,080	1 Mt. Deb.	103	102	99½
Entre Rios ...	808	15.6.46	ps. 395,600	— ps. 71,700	50	ps. 21,153,300	ps. 20,023,400	+ ps. 1,129,900	Ord. Stk.	7½	4½	6
G.W. of Brazil	1,030	15.6.46	25,200	+ 3,800	24	686,200	610,100	+ 76,100	Ord. Stk.	30½	23½	22½
Inter. Ctl. Amer.	794	Apr., 1946	\$963,780	+ \$135,112	17	\$3,878,475	\$3,109,079	+ \$769,396	"	—	—	—
La Guaira ...	22½	May, 1946	5,889	— 1,518	18	28,227	29,823	— 1,596	5 p.c. Deb.	78	70	60
Leopoldina ...	1,918	15.6.46	52,922	— 4,369	24	1,319,268	1,103,050	+ 216,218	Ord. Stk.	4½	3½	3½
Mexican ...	483	31.5.46	ps. 1,464,000	+ ps. 459,100	21	ps. 18,661,800	ps. 13,441,600	+ ps. 5,220,200	Ord. Stk.	½	½	1
Midland Uruguay	319	May, 1946	21,830	+ 1,483	48	203,280	196,052	+ 7,228	"	—	—	—
Nitrate ...	382	15.6.46	6,837	— 2,157	23	100,119	85,144	+ 14,975	Ord. Sh.	75½	67½	77½
N.W. of Uruguay	113	May, 1946	6,667	— 936	48	61,174	62,390	— 1,216	"	—	—	—
Paraguay Cent.	274	21.6.46	£ 58,310	— £ 6,785	50	£ 3,076,004	£ 3,111,357	— £ 35,353	Pr. Li. Stk.	79½	77	75½
Peru Corp. ...	1,059	May, 1946	136,088	+ 2,915	44	1,538,021	1,429,695	+ 108,326	Pref.	10½	7½	16
Salvador ...	100	Apr., 1946	£ 138,700	— £ 10,300	40	£ 1,393,700	£ 1,308,000	+ £ 85,700	"	—	—	—
San Paulo ...	153½	—	—	—	—	—	—	—	Ord. Stk.	60½	50½	55½
Taital ...	156	May, 1946	3,795	— 1,830	48	36,995	31,905	+ 5,090	Ord. Sh.	17½	10½	17½
United of Havana	1,301	15.6.46	59,122	+ 7,191	50	2,941,231	2,707,737	+ 233,494	Ord. Stk.	3	1	1½
Uruguay Northern	73	May, 1946	2,039	+ 193	48	19,390	18,105	+ 1,285	"	—	—	—
Canada												
Canadian National	23,569	May, 1946	6,156,800	— 1,366,600	21	30,910,800	34,842,400	— 3,931,600	—	—	—	—
Canadian Pacific	17,037	21.6.46	1,054,000	— 216,600	24	26,382,800	29,097,200	— 2,714,500	Ord. Stk.	24	14½	23½
Various												
Barsi Light ...	202	May, 1946	21,465	+ 90	9	54,465	48,562	+ 5,903	Ord. Stk.	131	123	113½
Beira ...	204	Apr., 1946	75,610	+ 2,752	28	508,964	536,577	— 27,613	"	—	—	—
Egyptian Delta	607	30.4.46	15,446	— 1,878	4	48,620	53,339	— 4,719	Prf. Sh.	10	8½	5
Manila ...	—	—	—	—	—	—	—	—	B. Deb.	71	55½	71½
Mid. of W. Australia	277	Apr., 1946	19,664	+ 3,191	40	172,148	189,748	— 17,600	Inc. Deb.	97½	85	75
Nigeria ...	1,900	Apr., 1946	352,900	+ 66,969	4	352,900	285,931	+ 66,969	"	—	—	—
Rhodesia ...	2,445	Apr., 1946	523,706	+ 52,416	28	3,517,907	3,491,415	+ 26,492	"	—	—	—
South African	13,301	18.5.46	1,100,585	+ 114,051	5	7,513,146	6,698,756	+ 814,390	"	—	—	—
Victoria ...	4,774	Feb., 1946	1,234,862	— 18,137	—	—	—	—	"	—	—	—

† Receipts are calculated @ 1s. 6d. to the rupee

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